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THE INTEREST RATE AND INVESTMENT IN A DYNAMIC ECONOMY

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Those who are responsible for making investment decisions frequently deny that those decisions are affected by the level of the interest rate. Before the war a group of Oxford economists interviewed a number of business men concerning the effect of the interest rate on investments, and the results of the inquiry have been summed up as follows: "The majority deny that their activities have been, or are likely to be, directly affected in any way by changes in interest rates. Of those who take the view that they might sometimes be affected, few suggest that the influence is an important one."[1]

Economists and monetary authorities, on the other hand, at least throughout the nineteenth and the first three decades of the twentieth century, regarded interest policy as an effective instrument by which the volume of investment could be contracted or expanded. Even today this view has not been abandoned, although the emphasis has definitely shifted away from interest policy toward variations in public expenditures. The British White Paper on *Employment Policy,* issued in May, 1944, explains the effect of interest rate policy on investments in the "orthodox" fashion. "If the cost of borrowing money is high, some projects which are not profitable at that rate will be held back. When it falls again, those projects will be brought forward and others will also be taken in hand." Nevertheless, the paper does not lay primary emphasis on interest rate policy. While it keeps "the possibility of influencing capital expenditures by the variation of interest rates . . . in view," it relies much more on public expenditures as a means of regulating investment and employment.

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[1] H. D. Henderson, "The Significance of the Rate of Interest," Oxford Econ. Papers, No. I, October, 1938, p. 9.

The divergence of opinion between those who try to prove analytically that the level of interest rates must affect investment, and those who maintain that in practice the effect is negligible may simply be due to differences in the assumptions from which they are proceeding. Even if it can be demonstrated in strict theory that, under the assumption of other things being equal, a change in the interest rate will have an effect on investment, it may still be true that the effect will not visibly manifest itself in a dynamic world where other things are not equal. These "other things" may be so important that they submerge the effect which the interest rate can be shown to have under static assumptions.

This article is an attempt to show the effects of introducing dynamic elements into the theory. It is not claimed that their introduction will enable us to give a full explanation of investment decisions; for into every such decision there enter factors which are not capable of generalization and therefore of theoretical treatment. Nonetheless a considerably more realistic explanation than that given by static theory is possible once account is taken of certain major dynamic forces.

In what follows we shall examine the effect of a change in the interest rate (and by change we mean a change within the limits of, say, two per cent, *e.g.*, from five to three per cent or vice versa) under four heads: the effect on (I) the holdings of inventories (variable capital), (II) the use of durable producers' goods, and (III) the use of durable consumers' goods, among which the most important item is houses. Section IV contains some remarks on the area of influence of the interest rate, and on the effect of changing interest rates on the behavior of financial institutions.

I. *Inventories*

Hawtrey's well-known theory of the influence of the interest rate on inventories in the hands of wholesalers is a convenient starting point for the discussion of the first problem mentioned above. The wholesaler, Hawtrey says, "makes his profit out of the difference between the price at which he buys and the price at which he sells, and the set-off against his gross profit for insurance, rent, wages, etc., is quite small compared to the whole value of the goods. The set-off on account of interest is therefore by no means unimportant."[2] Since such parts of the inventories as are held with borrowed money give rise to interest payments, "a sudden jump in a half year's interest from two to three and a half per cent may well make a merchant hesitate to order a

[2] R. G. Hawtrey, "Currency and Credit" (London, Longmans Green, 1930), p. 25.

fresh consignment." In consequence the manufacturer will find that fewer orders are coming in and he will cut down production.

Hawtrey's argument requires some elaboration before it can be examined more closely. Suppose that the goods in which a wholesaler trades remain in his storage room for three months on the average and that he finances his purchases by borrowing on three months' credit. His variable costs include the interest charge for three months. Assuming that the costs of additional units of output (sales) increase as his output increases (*i.e.*, that the marginal cost curve is rising), he will push his sales to the point where marginal revenue equals marginal cost. If the interest rate is now raised, the marginal cost curve, of which the interest charge for three months is an element, will be raised correspondingly. In strict theory we must then suppose that the entrepreneur will reduce his output (and, in an imperfect market, raise the price) so that at the new point of equilibrium the marginal revenue again covers marginal cost.

This argument, though logically correct, omits several significant factors:

1. Although the trader's profit will be reduced when the interest rate rises, it is unlikely, particularly if he considers the rise in the short-term interest rate to be temporary, that he will at once cut down sales (and raise the price). This is true for two reasons: first, he may have no clear notion of the shape of his cost (and demand) curve, and thus may not be aware that if he reduces his sales the fall in his profits will be less than if the old volume of sales is maintained. Secondly, and this is a more important point, even if he is aware of this fact, the necessity of keeping the good will of his customers may be a stronger consideration than his (probably slight) loss in profits. Over a longer period of time such a policy may result in higher profits than a policy of trying to maximize profits over the short period.

If he does not reduce his sales when the interest rate rises, he is not likely to reduce his inventory either; he knows by experience that a certain volume of sales requires a certain inventory level. Such changes in the ratio of inventories to sales as occur in practice are the result of "speculative" purchases of inventory due to price fluctuations, or of long-run improvements in merchandising technique, or of sudden changes in sales. During the cycle the movement of inventories follows the movement of sales, which suggests that the latter is the dominant factor influencing the former.

2. The trader may finance his business predominantly with his own capital, in which case he will not "feel" a rise in the interest rate as forcibly as he would if he depended on bank credit. If, for example,

only one-tenth of his inventory is financed by bank debts, a change in the interest rate by as much as two per cent will have a negligible effect on his cost calculations.[3]

Even before the present war and as far back as the twenties, wholesalers in the United States were not greatly indebted to the banks. Examination of a sample[4] of 27 large trade corporations owning 27 per cent of the total assets of all large trade corporations shows that in 1929 the bank debts of the whole sample amounted to only 9.7 per cent of the inventories. All through the thirties the ratio was still lower.

3. Increases in interest rates commonly occur in periods when prices are rising and are expected to go on rising, and reductions in interest rates when prices are falling and are expected to go on falling. In such situations interest policy will not be the dominant influence. If, for instance, a trader expects prices to rise by one per cent over three months, an increase in the interest rate by as much as two per cent will not prevent him from increasing his inventory. The effect of an expected price rise in inducing an increase in inventories will, as a rule, be stronger than the effect (if any) of a rise in the interest rate in causing a decrease.

II. *Durable Producers' Goods*

We turn now to the influence of the interest rate on the use of fixed equipment in the manufacturing process. In order to determine whether it is profitable to invest in a certain machine, the entrepreneur has to compare the present value of the revenue imputable to that machine with the costs of the machine. The result of this comparison is influenced by the level of the interest rate in two ways: (1) inasmuch as interest enters into the construction costs of the machine, a fall (rise) in the interest rate lowers (raises) its cost. Since, however, interest is a very small part of the costs of construction, this effect is negligible. (2) Inasmuch as the interest rate is used as a capitalization factor, a fall (rise) in the rate will raise (lower) the present value of the revenue from the machine.[5]

[3] We are here proceeding on the assumption that in practice business firms calculate with average and not marginal costs.

[4] The sample was collected under the Financial Research Program of the National Bureau of Economic Research.

[5] In using the capitalization procedure, account has to be taken, of course, of the risk factor. If future revenues are capitalized with the market rate of interest (or the rate which the entrepreneur pays on his debts where this rate differs from the market rate), the risk factor must be taken into account by an appropriate treatment of the entrepreneur's expectations regarding the future revenue stream from the machine. Before this revenue stream is capitalized, the most probable value for the revenue expected for each year during the lifetime of the machine must be "corrected" with a factor expressing the risk which, in the entrepreneur's opinion, attaches to it. The capitalization procedure adopted in practice will be discussed later.

It should be observed that the influence which the interest rate exerts as a capitalization factor is identical with the influence which it exerts as an element in the cost of using the machine. If an entrepreneur capitalizes the stream of revenues imputable to a machine (*i.e.*, the gross revenues minus the operating expenses[6]), he obtains a figure equal to the sum of money which, if he invested it in the capital market, would at the end of a period equal in length to the lifetime of the machine, have "grown into" the same sum of money as he accumulates by investing in, and operating, the machine. If the present value of the revenue happens to equal the cost of the machine, this means that, if he took all the units of revenue obtained from the machine over its lifetime and invested them, as they accrued, in the capital market at compound interest, he would at the end have a sum equal to the capital sum originally invested in the machine plus the accumulated interest which he could have obtained by investing that sum in the capital market for the same length of time. Assuming that he paid all of the accumulated interest charges in a lump sum at the end of the lifetime of the machine, he would have just enough to pay the creditors what he owes them (both principal and interest). Alternatively, if he applied the revenue obtained from the machine each year to the reduction of his debt, by the time the machine's life was at an end he would have paid to the creditors the principal of the debt plus the interest rate calculated on a gradually declining principal. If the present value of the revenue is above the cost of the machine, the entrepreneur will, of course, earn more than the interest on the invested capital, and vice versa if the present value is below the cost.

It is clear then that the costs of using the machine (in the form of interest payments to the creditors) have been taken care of by the comparison of the capitalized revenue imputable to the machine with the initial costs of that machine. There is, therefore, no sense in saying for example that the interest rate is negligible as a factor in the costs of using the machine, but is of considerable importance as a capitalization factor. Such statements are, however, sometimes made.[7]

We are now ready to proceed with the analysis of the influence of

[6] The term operating expenses is here used in the narrower sense, excluding depreciation and interest charges.

[7] In an otherwise very informative article ("The Risk of Obsolescence and the Importance of the Rate of Interest," *Jour. Pol. Econ.*, Vol. LI, No. 4 [Aug., 1943], pp. 349-55), M. Moonitz first discusses the interest rate as a cost factor, by which he means the costs not of constructing, but of using a machine. He then proceeds to discuss interest as a capitalization factor. He says: "In addition to measuring one element in costs, the rate of interest serves as a capitalization factor"; and he concludes: "Even though interest is not of great importance as a cost factor, the role of the interest rate as a capitalization factor would seem capable of restoring it to a position of prominence" (p. 354).

a change in the interest rate on investments in the manufacturing process.

A. Horizontal Expansion and Contraction

According to static economic theory a fall in the interest rate induces an expansion of fixed equipment and a rise a contraction. In this subsection we shall assume (unless the contrary is expressly stated) that the expansion is of the horizontal (parallel) type, *i.e.*, that the entrepreneurs add new machines of the same type as those already in use. Correspondingly, a contraction means that replacements are not fully made. We are not here going to consider the case where alternative techniques are available and the problem of substitution arises. This will be dealt with below.

In competitive equilibrium the present value of the revenue (gross revenue minus operating expenses) obtainable from the "marginal" machine of any type used by a firm must just equal its cost.[8] If now the interest rate falls, the present value (V) of the revenue stream obtainable from each type of machine will rise, thus raising the present value of the profit (V-C, where C stands for the cost of the machine) on each type of machine. This will induce the entrepreneur to increase the number of machines. Conversely, if the interest rate rises, he will fail to make replacements.

By how much the present value of the profit will rise as a result of the fall in the interest rate depends on two factors: (a) ***the length of the revenue stream*** (or, alternatively, the lifetime of the machine), since the more distant the revenues are, the more is their present value affected by a change in the interest rate; and (b) ***the breadth of the revenue stream***. The present value of a broad revenue stream over a given period of time will obviously rise more in absolute terms as a result of a fall in the interest rate then the present value of a narrow revenue stream. Thus the broader and longer the revenue stream imputable to a machine, the greater will be the incentive to expand in a horizontal direction if the interest rate falls,[9] and, conversely, if the interest rate rises.

It should, however, be noticed that the breadth of the revenue stream will be irrelevant if the rate of profit over cost ($\frac{V}{C}$) is maxi-

[8] This presupposes that the revenue imputable to a machine can always be separated out of the total revenue stream which is not always the case.

[9] If we start from a static equilibrium situation, a horizontal expansion of all the firms is of course impossible. Those firms for which V-C rises most will expand at the expense of those for which V-C rises least. This result will be brought about by a rise in the prices of the productive factors in a way which need not be analyzed here.

mized, instead of the present value of total profits (V-C).[10] Consider the case of two machines A and B which have the same lifetime but where the annual revenue from A is greater than that from B. Suppose that, at a given interest rate, the present value of the revenue stream of each of the two machines equals the cost of that machine; in order for this to be so machine A must obviously be correspondingly more expensive than machine B. If the revenue streams are now capitalized with a lower interest rate than before, the rate of profit over cost $\left(\frac{V}{C}\right)$ will rise in the same proportion for both machines.[11] Thus if we assume that entrepreneurs attempt to maximize $\frac{V}{C}$ instead of V-C, the incentive to expand will be no greater for one who uses the higher-priced machine than for one who uses the lower-priced machine. It can be argued[12] on purely theoretical grounds that the entrepreneur should aim at maximizing V-C, but it is doubtful whether in practice he does so. The formulas actually in use for calculating the expected profitability of machines are usually based on the assumption that $\frac{V}{C}$ is to be maximized.

The next step in our argument is to drop the assumption of "other things being equal." In a dynamic world a large part of industrial equipment is subject to obsolescence. Entrepreneurs customarily allow for the possibility of obsolescence by basing their calculations of profitability on a much lower figure for the expected lifetime of the machine than would correspond to a lifetime calculated on a wear-and-tear basis only. Or, to adopt the phraseology commonly used in business, they calculate that the machine, in order to be installed, must promise to "pay for itself" within a relatively short period, which, in many cases, turns out to be shorter than the actual lifetime. According to L. P. Alford, replies to a questionnaire sent out to business men in the late twenties showed that 97.4 per cent of all those questioned considered it necessary that the initial investment in machines should be returned in five years or less; 61.4 per cent set a limit of

[10] I have discussed differences arising from the application of these two criteria in an article entitled "The Criterion of Maximum Profits in the Theory of Investment," *Quart. Jour. Econ.*, Vol. LX, No. 1 (Nov., 1945).

[11] At least this is the case if we assume that the time shape of the revenue stream is the same for the two machines. The statement in the text does not apply to the case of machines which give rise to revenue streams of different lengths. If, at a given interest rate, the *V's* obtainable from two machines with different lifetimes equal the respective *C's*, a fall in the interest rate will raise the V for the machine with the longer lifetime relatively more than the V for the machine with the shorter lifetime.

[12] As I have done in the article cited above.

three years or less.[13] This seems to be the common practice for machines which are subject to obsolescence. Translated into our terms this means that, for such machines, only if the capitalized revenue for five or three years exceeds or equals the price of the machine will it be introduced. A fall in the interest rate by one or two per cent will raise the present value of a revenue stream spread over three or even five years by very little, and its effect is therefore likely to be counterbalanced by other forces influencing the entrepreneur's investment decision.

One of these forces is the change in expectations about the future revenue imputable to the machine. The entrepreneur may anticipate that the physical output or the selling price is going to rise or fall. The greater the expected output stream per year and the higher the expected price, the greater will be the present value of the revenue stream which is to be compared with the cost of the machine. The effect of changes in anticipations about the breadth of the output stream and the price of the output are likely, in the case of short-lived machines, to be much more potent forces than changes in the interest rate. For instance, if the revenue imputable to a machine is expected to be $800 a year for five years, the present value of this revenue at 3 per cent will be $3,663. Suppose that this present value (at 3 per cent) is just equal to the cost of the machine. A rise in the interest rate to 5 per cent would cause the present value of the revenue to fall below the cost of the machine by $200. If, however, the entrepreneur anticipated an increase of 3 per cent a year in the revenue stream, starting in the second year, the effect of this on the present value of the revenue stream would be sufficient to counterbalance the effect of the rise in the interest rate.[14]

The case is different for capital goods of long durability, such as railway equipment, blast furnaces, ships, etc. First, as was pointed out before, the longer (and broader) the revenue stream imputable to capital goods, the greater is the effect of a change in the interest rate on the present value of that revenue stream. Secondly, whereas in the case of short-lived machines an entrepreneur may, in a period of cyclical upswing, anticipate that the output or the prices will be continually rising during the machine's lifetime, in the case of a capital good which is expected to last through a whole business cycle or longer, he is not likely to base his calculation on increasing output or increasing prices over the whole lifetime of the capital good (unless

[13] L. P. Alford, *Technical Changes in Manufacturing Industries,* Recent Economic Changes, I. (New York, 1929), p. 139. See also the newer material in L. P. Alford (editor), *Cost and Production Handbook* (New York, Ronald Press, 1942), p. 774.

[14] The present value of a revenue stream which starts at $800 and increases by three per cent annually from the second year on is, at five per cent, $3,668.

he expects a rising price or output trend). Though he may anticipate rising revenues in the more immediate future, he must allow for the possibility that at some later date during the lifetime of the equipment the reverse movement will set in. The same applies *mutatis mutandis* to the case of an initial fall in revenues in a period of cyclical downswing. Expectations of changes in prices and output are, therefore, much less likely, in the case of long-lived equipment, to counterbalance the influence of a change in the interest rate on profit calculations.

The expectation of changes in the future revenue stream from a machine due to price and output changes is not the only force capable of counteracting the influence of the interest rate. In most branches of manufacturing there is a constant stream of technical inventions.[15] Their effect is to widen the gaps between the costs of the capital goods and the capitalized revenue imputable to them, or to create such gaps where none existed before. It seems improbable that a rise in the interest rate within the usual limits will act as an effective check on an expansion of investment induced by technical inventions.[16] The rate of technical progress, and therefore the importance of inventions, is probably smaller for public utilities than for most manufacturing industries.

B. The Substitution of Capital for Labor

According to static economic theory a fall in the interest rate, by cheapening capital in relation to labor, will induce entrepreneurs to substitute more capitalistic methods for less capitalistic methods. This proposition presupposes that the entrepreneur has a choice between a large number of methods each of which differs from the "next" less capitalistic one by the use of slightly more capital and slightly less labor, *i.e.*, that there is a continuous series of alternative methods. This assumption is not realistic. We come nearer to the truth if we assume there are wide gaps in the series, so that the entrepreneur has a choice only between a few methods of production. In this case, the conclusion that a fall in the interest rate will lead to the introduction of a more capitalistic method is not necessarily warranted.

[15] It is for this reason, of course, that entrepreneurs expect a large part of their machines to become obsolete in a relatively short time.

[16] It is not possible to deal fully with this aspect of the problem here. A brief reference may, however, be made to the conditions under which it pays to replace an old machine by a new one. If the profitability of the new machine is estimated by the capitalization procedure, the conditions may be formulated as follows: It pays to discard the old machine as soon as the difference between its revenue and operating expenses falls short of the interest on its own scrap value plus the interest on the present value of the profits (V-C) on the new machine. (See G. Preinreich, "The Economic Life of Industrial Equipment," *Econometrica*, Vol. 8, No. 1 [Jan., 1940], pp. 15 *ff*.

Consider two machines A and B. The operation of each produces the same output stream per unit of time over the same period until the machine is worn out. Machine B is more expensive (requires a greater initial investment), but the operating expenses connected with it are smaller than those connected with machine A (*i.e.,* the wage bill is smaller per unit of time). The revenue per unit of time which is imputable to machine A is, therefore, smaller than that imputable to B.

Suppose that the application of the capitalization formula shows that at the higher of two interest rates the cheaper machine is the more profitable. What are the conditions which must be fulfilled if, at a lower rate, the more expensive machine is to be the more profitable? If the interest rate falls, the present value (V) of the revenue imputable to both machines will rise, that of machine B more so than that of machine A. The present value of the profit on machine B (if there was one at the higher interest rate) will therefore rise more than that on machine A, since the cost (C) of each machine is the same as it was before. But in order for the present value of the profit on machine B to exceed that on machine A at the new (lower) rate of interest, the former must rise by more than the difference which existed between the present values of their profits at the old higher rate of interest plus the increase in the present value of the profit on machine A which results from the fall in the rate. Since the present value of the profit is found by deducting the cost of the machine from the capitalized revenue, the outcome must obviously depend on the relative costs of the machines. We can indicate the range within which the cost of machine B must lie, given the cost of machine A, in order for a fall in the interest rate to render machine B more profitable than machine A by the formula:

$$V_{BH} - (V_{AH} - C_A) < C_B < V_{BL} - (V_{AL} - C_A)$$

where V_{BH} and V_{BL} are the present values of the revenue obtainable from machine B at the higher and lower interest rates respectively, V_{AH} and V_{AL} the present values of the revenue obtainable from machine A at the higher and lower interest rates respectively, and C_A and C_B are the costs of machines A and B. If C_B is below $V_{BH} - (V_{AH} - C_A)$, machine B will be more profitable than machine A both at the lower and at the higher interest rate. If C_B is within the range indicated by the formula, machine B will be more profitable than machine A, if the lower of the two interest rates prevails, and less profitable if the higher rate prevails. If C_B is above $V_{BL} - (V_{AL} - C_A)$, machine A will be more profitable than B at both interest rates. Thus only if the price of the higher priced ma-

chine happens to fall within a certain range can the lower interest rate induce investment in it.

The following table gives an arithmetical example:

	Costs	Durability (years)	Revenue imputable to the machine per year	Present value of revenue at 5%	Present value of revenue at 3%	Present value of profits at 5%	Present value of profits at 3%
Machine A	$3,000	5	$ 800	$3,463	$3,663	$463	$663
Machine B	$3,900	5	$1,000	$4,329	$4,580	$429	$680

If machine B costs $3,900, it is more profitable than machine A at three per cent and less profitable at five per cent. At any price below $3,866 ($4,329 minus $463), B is more profitable than A at both interest rates. At a price for B above $3,917 ($4,580 minus $663), B is less profitable than A at both interest rates.

The greater the durability and the greater the revenue per unit period of machine B, the more likely is it that a fall in the interest rate will cause it to be substituted for machine A; for the longer and broader the revenue stream attributable to B, the greater will be $V_{BL} - (V_{AL} - C_A)$. A fall in the interest rate is, therefore, most likely to affect those industries with equipment of long durability and a high ratio of machine costs to operating expenses. Public utilities and railways are thus more likely to react to a fall in the interest rate by shifting to more expensive equipment than is manufacturing industry. The electrification of a railway system, for instance, may be rendered profitable by a reduction in the interest costs.

C. Methods Used in Practice for Estimating the Profitability of Investments

Although the capitalization formula, on which the preceding analysis has been based, is frequently used in practice (particularly for estimating the profitability of equipment of long durability), it is less widely used than what may be called the "unit cost formula."[17] Of the latter there are two main variants.

In both variants the average annual gross revenue (the yearly average of the undiscounted future revenues) is estimated. The annual costs are estimated similarly. In variant I of the formula the annual costs include (in addition to the costs of labor and material, upkeep, maintenance, depreciation, taxes, etc.) interest on half the original

[17] Information on the methods of calculating the expected profitability of machines is contained in L. P. Alford (editor), *Cost and Production Handbook* (New York, Ronald Press, 1942); W. Rautenstrauch, *The Economics of Business Enterprise* (New York, Wiley, 1939); E. L. Grant, *Principles of Engineering Economy* (New York, Ronald Press, 1930).

investment in the machine, the assumption being that on the average the equipment is half worn out, *i.e.*, that its average unexpired (or book) value is half its original cost. The annual costs are then compared with the annual revenue; if the latter exceeds the former the investment in the machine is considered to earn more than the interest rate. In variant II, interest is excluded from the estimated costs. The difference between annual revenue and annual cost is then expressed as a rate of profit on the original investment, and this rate can be compared with the interest rate. The two variants of the unit cost formula are less accurate than the capitalization formula; in all three formulas, however, interest enters as an element in the calculation.

The "interest" factor which is used in all these formulas is in practice usually not identical with, but higher than, the long-term interest rate in the market, the difference being an allowance for the risk involved in the investment. This would be immaterial in the present context provided the interest factor used followed the movement of the interest rate in the market. Many companies, however, base their calculations on some "normal" rate of return which is considered appropriate to their industry, a rate which is independent of the movement of the long-term market rate. In this case fluctuations in the latter do not affect their investments at all. This is probably the explanation behind the statement made by Henderson in the article referred to that "frequently in response to our questions, the methods of calculation actually employed in weighing projects of capital expenditures were precisely explained; and they were such as to disregard altogether variations in interest rates."

It is unfortunately impossible to judge how widespread is the custom of calculating with a standard rate of "interest" which is independent of the level of the market rate. It seems reasonable to suppose that the practice is likely to be particularly widespread among companies which, because their interest payments are of negligible magnitude, are not sensitive to changes in the interest rate. The importance of interest payments in a company's finances will depend on (1) the use which is made of long-term debts as a method of financing, and (2) the ratio of machine costs to operating expenses.[18] A study of the income statements of a representative sample[19] of 84 large manufacturing corporations owning 45 per cent of the total assets of all large manufacturing corporations, reveals for 1938 that for the company

[18] We are throughout using the term "operating expenses" in the narrower sense defined in footnote 6 on page 815.

[19] Collected under the Financial Research Program of the National Bureau of Economic Research. The sample is described in detail in A. R. Koch: *The Financing of Large Corporations, 1920-39* (New York, 1943), Appendix A.

with the highest ratio of annual long-term interest charges to total annual costs (operating expenses, depreciation, maintenance, selling and administrative expenses, interest charges, etc., but excluding taxes), the ratio was 3.5 per cent. For the majority of the companies the ratio was below one per cent; 37 companies had no debts at all.

The ratio is higher for public utilities and railroads. These have relatively low operating expenses and often finance a large part of their assets with bonds. Many of them, therefore, have substantial interest charges. An indication of the importance of these charges for public utilities may be obtained from Table I.

TABLE I—ELECTRIC PUBLIC UTILITIES, 1938[a]

Long-Term Interest Charges as Percent of Total Costs	Number of Utilities
0	84
0– 4.99	21
5– 9.99	37
10–14.99	63
15–19.99	63
20–24.99	28
25–29.99	17
over 30	7
	320

[a] Source: *Statistics of Electric Utilities in the United States, 1938* (Report of the Federal Power Commission).

The statistics relate to privately-owned electric utilities with annual electric revenues of $250,000 or more. Their number in 1938 was 393. Of this number those were selected which had non-operating income or loss (including income or loss from utility plants leased to others) of less than two per cent of operating income. Total costs include interest charges and what the report calls "operating revenue deductions" (operating expenses, depreciation, amortization, taxes and some other minor items). Since the corporate income tax which is included in taxes cannot be considered as a cost item, total costs are too high, *i.e.*, the percentages of interest cost to total cost in the table are somewhat too low.

It is permissible then to assume that public utilities pay close attention to the long-term interest rate and that the level of the latter does influence their *ex ante* cost calculations. If this is so, we have here an area of economic activity in which changes in the interest rate are likely to be important.

Even here, however, the reaction to a change in the interest rate may not be immediate. Although the interest rate has already fallen, public utilities may still postpone investment, anticipating a further fall in the interest rate, and will only expand when, in the opinion of those responsible for investment decisions, the interest rate has reached its lowest point. Conversely, rising interest rates may not

check an expansion until the rate has reached a level which is considered abnormally high and therefore not likely to last.

III. *Durable Consumers' Goods*

A. Horizontal Expansion

The factors which affect investment in new durable consumers' goods (best represented by houses) are fundamentally the same as those affecting investment in durable producers' equipment. Investment in houses will be profitable if the capitalized future revenue (*i.e.*, rent minus repair costs, etc.) imputable to it exceeds the costs of construction. As houses have a relatively long lifetime, even after allowance is made for obsolescence, a change in the interest rate will exert a considerable influence on the present value of the revenue stream and the level of the interest rate must therefore be regarded as an important factor affecting the volume of residential construction.

The relative importance of various factors influencing investment in houses may be illustrated by an example. If the annual rent (after deducting repair costs) expected for an apartment house is $5,000, and the entrepreneur who contemplates building that house considers it necessary that the investment should be returned in ten years, then, with an interest rate of 7 per cent, he will calculate with a present value of the rent stream of $35,100. If, however, being now less uncertain about the future, he considers it sufficient to have his capital returned in fifteen years, his calculation will be based on a present value of the rent stream (of $5,000 a year) of $45,608.[20]

The same increase in the present value of the profit as is brought about by this extension of the "time horizon" from ten to fifteen years will equally well be brought about by a rise in the annual rent from $5,000 to $6,495 (over the ten-year period), or by a fall of $10,508 in the building costs, or by a fall in the interest rate from 7 per cent to 6.1 per cent.

Even if the comparison of the present value of the revenue stream with the construction costs of a house indicates to a potential buyer that the purchase is profitable, the purchase may, of course, still not materialize because the buyer cannot raise the necessary funds. The volume of investment in houses depends, then, not only on the estimated length and breadth of the revenue stream, the building costs and the interest rate, but also on the terms on which funds are

[20] This calculation gives us an indication of the importance of the uncertainty factor. If a decrease in the uncertainty about the future causes the estimate of the economic lifetime of the house to be raised, that house may shift from the class of unprofitable investments to that of profitable investments, even though neither the interest rate, nor the building costs, nor the rent has changed.

obtainable for financing the purchase of houses, or, more particularly, on the size of the down payment and the length of the amortization period (on which depends in part the size of the annual payment) for mortgages.[21] The smaller are both the down payment and the annual payment, the larger will be the number of people who can afford to buy houses. With a given amortization period for the mortgage, a fall in the interest rate will reflect itself in a reduction in the annual payment which the buyer has to make.[22]

Although the level of the interest rate is a factor of great importance for residential construction, we cannot conclude that a fall in the rate will always stimulate and a rise always check investments in this area. When incomes are declining and their future level is uncertain, a reduction in the annual payment due to a fall in the interest rate, may fail to stimulate the demand for houses. In times of increasing economic activity, a rise in the interest rate will be the less effective in checking building activity the more convinced people are that the boom is going to last. In the earlier stages of the recovery from a depression a rise in the interest rate is unlikely to check investment in houses.

B. Durability

According to static theory a fall in the interest rate will not only stimulate investment in new houses, but will also induce entrepreneurs to build houses of longer durability requiring larger investments.

The argument advanced by economists to show that houses will be made more durable if the interest rate falls is based on the assumption that, as a house is made more durable, the costs required to add one year to its lifetime decrease, at least over a certain range. The entrepreneur's profits will then be a maximum when the present value of the rent for the last year added to the lifetime of the house equals the costs of adding this last year. A fall in the interest rate, by raising the present value of the last year's rent above its cost, will make it profitable to extend the lifetime of the house.

In practice this mechanism tends to be overshadowed by other factors. Changes in fashion with respect to houses, the rapid techno-

[21] There is, of course, no fundamental difference in this respect between residential construction and other areas of economic activity. In manufacturing industry many investments which entrepreneurs consider profitable cannot be made because the entrepreneurs are unable to meet the credit conditions which the lenders impose upon them. (See next section.)

[22] C. A. Long (*Building Cycles and the Theory of Investment* [Princeton, 1940], p. 28) quotes the example of a $6,000 house with an insured mortgage of 90 per cent of the purchase price, to be amortized over twenty-five years. The total annual charge for amortization, interest and taxes and insurance, amounts at 5 per cent to $580, at 3 per cent to $467 and at one per cent to $402.

logical development in the internal equipment, and shifts in population have induced entrepreneurs in the last decades to build houses of increasingly short durability, irrespective of the level of the interest rate. In terms of the argument given previously, these factors have made the distant returns on a house more uncertain. The tendency of the entrepreneur to base his calculations on shorter and shorter periods of revenue from the house counteracts the influence which a fall in the interest rate would otherwise have on its durability.

IV. *The Area of Influence of the Interest Rate and the Behavior of Financial Institutions*

The figures in Table II show the relative importance of gross capital formation in various branches of economic activity.

Residential construction (including repairs, etc.)[23] plus new construction in public utilities amounted to 25.5 per cent of total capital formation in the boom year of 1929, to 31.4 per cent in the depression year of 1931, and to 23.3 per cent in the depression year of 1933. Parts of the other items listed in the table must be added to these two classes of investments as being sensitive to changes in the long term interest rate. On the other hand, since many public utilities do not make use of long-term debts, and since the figures for residential construction include repairs, a part of the volume of investment in these two lines of activity probably has to be excluded from the sensitive category. The guess may therefore be ventured that roughly one-quarter of the gross capital formation is at best directly affected by changes in the long-term interest rate. The proportion becomes still lower when expenditures on maintenance and repairs are included in the total of gross capital formation.

If we investigate these areas of economic activity empirically, we find, for instance, that in 1921-22, when the long-term interest rate fell sharply, residential house building, and also (in 1922) new investment in public utilities,[24] increased while investment in manufacturing industry declined. Conversely, we find that the rise in the long-term rate in 1929 was accompanied by a sharp fall in residential house building (though not in the construction of public utilities) before investment fell off in other areas (including public utilities). It is not, of course, possible to go beyond this statement of facts and to conclude that the change in the interest rate was the *cause*

[23] The way in which the statistics are set up does not allow us to exclude repairs and maintenance from this item as they are excluded from the other items. The percentages shown, therefore, slightly overestimate the proportion of residential and public utilities construction to the total capital formation (excluding repairs and maintenance).

[24] In 1922 the interest rate on public utility bonds fell by more than one per cent.

TABLE II—GROSS CAPITAL FORMATION IN THE UNITED STATES[a]

Type of Capital Formation	1929		1931		1933		1937		1938	
	Million Dollars	Percent of Total	Million Dollars	Percent of Total	Million Dollars	Percent of Total	Million Dollars	Percent of Total	Million Dollars	Percent of Total
1. Residential construction (including additions, repairs and alterations)	3,010	15.3 (11.0)	1,262	15.4 (9.5)	392	10.9 (6.0)	1,956	11.1	1,746	14.5
2. Public utilities, new construction	2,030	10.2 (7.5)	1,326	16.0 (10.0)	450	12.4 (6.8)	2,555	14.6	1,952	16.3
3. Other business construction	2,551	12.9 (9.4)	906	10.9 (6.8)	486	13.3 (7.4)				
4. Public construction	2,928	14.8 (10.8)	2,615	31.6 (19.6)	1,383	38.0 (21.1)	2,889	16.4	3,455	28.8
5. Producers' durable goods	6,908	34.7 (25.4)	3,531	32.7 (26.5)	2,051	56.4 (36.3)	6,828	38.9	5,169	43.0
6. Changes in business inventories	2,414	12.1 (8.9)	−1,375	−16.6 (−10.3)	−1,126	−31.0 (−17.2)	3,337	19.0	−314	−2.6
Total (items 1 to 6)	19,841	100	8,265	100	3,636	100	17,565	100	12,003	100
7. Construction repairs and maintenance	5,689	(20.9)	4,091	(30.8)	2,280	(34.8)				
8. Producers' durable goods, repairs and maintenance	1,654	(6.1)	943	(7.1)	644	(9.8)				
Total (items 1 to 8)	27,184	(100)	13,299	(100)	6,560	(100)				

[a] Source: S. Kuznets, *Commodity Flow and Capital Formation*, Vol. I, 1938; and Kuznets, *Commodity Flow and Capital Formation in the Recent Recovery and Decline, 1932–1938*, Bulletin 74 of the National Bureau of Economic Research, 1939. Consumers' durable commodities (other than houses), repairs on them, changes in stocks of silver and gold and changes in claims against foreign countries have been omitted in this table.

of the increase or decrease in investments in houses and public utilities. There are, moreover, many instances where the movement of the long-term interest rate is *positively* correlated with the movement of the volume of investment in these two areas.

So far as the *total* volume of capital expenditures is concerned, it is generally true that an increase in these expenditures is accompanied by rising, and a decrease by falling interest rates. This correlation supports our general thesis that in a dynamic world changes in the level of the interest rate are not usually sufficient to check or stimulate aggregate investment. However, the fact that the turning point from boom to depression is preceded by a high level of interest rates, and the turning point from depression to recovery by a low level, seems to indicate that situations exist in which the interest rate does exert an influence on the total volume of investment. Though we are again of course not justified in drawing the conclusion *post hoc propter hoc*, it can be plausibly argued that the high (low) level of the interest rate is at least a contributory factor in inducing the recession (revival). This is so for three reasons:

First, there is the possibility that the high level of interest rates succeeds in bringing about a decline of investment in houses and public utilities, and that this decline then spreads to other parts of the economic system via the decrease in the demand for construction materials. In order to have this effect, however, the decline will have to be of such magnitude that it more than counterbalances any rise that is still taking place in investment expenditures in those industries where investments are insensitive to the rise in the interest rate. The figures given above seem to indicate that it is unlikely to be of such a magnitude.

Secondly, interest rates, if they are unusually high, may affect investment by influencing the profit expectations of entrepreneurs. It has often been suggested that the level of the official discount rate serves the entrepreneur as a barometer of the general business situation. If this is so, a discount rate which he considers to be abnormally high will lead him to expect a fall in the revenue stream from new machines in the near future, and this may well make their installation appear unprofitable. To what extent entrepreneurs have in the past actually regarded the discount rate as a barometer of future business conditions is impossible to ascertain.

Thirdly, a level of interest rates which is considered abnormally high (or low) may affect investment indirectly by influencing the behavior of financial institutions. A change in interest rates may make itself felt less by affecting profit calculations, and through them the demand for funds than by affecting the behavior of financial

institutions which lend the funds or act as intermediaries between the borrowers and the ultimate lenders. This aspect of our problem raises questions of wide scope which cannot be dealt with *in extenso* in this article. A few remarks must suffice.

As far as commercial banks are concerned a substantial drop in the official discount rate (accompanied by an increase in the liquidity of the banks and a fall in the rates which they charge customers) may induce them to "comb the market" more thoroughly than before. They may be willing now to consider projects which they would have refused previously. Thus they may be more ready than before to lend to entrepreneurs who wish temporarily to finance the installation of new equipment by short-term credits with the intention of funding the credits later through security issues, or of repaying them out of working profits. They may lower their requirements with respect to the "current ratio" which is so frequently used as an index of the credit-worthiness of customers, and resort to other devices for creating an outlet for their funds. This means that entrepreneurs will now be able to undertake investments that were previously held up only by the difficulty of obtaining funds.

The reverse applies even more forcefully when the discount rate has reached a level which is considered abnormally high. Such high rates are usually accompanied by "moral suasion" on the part of the central banks which makes the commercial banks more reluctant to borrow from them. As a consequence, the commercial banks will not only tighten the conditions under which they themselves grant credit to business, but they will also often resort to credit rationing.

If an investment house thinks that the long-term interest rate is unusually high, it may hesitate to sponsor corporate bond issues for fear that the corporations may default on the interest payments in some future depression and thus reflect on the reputation of the investment house.[25] The issue of stocks may be subject to similar considerations. An investor in a stock expects to earn on it a return which is, on the average, at least as high as the return obtainable on bonds. If the investment house takes a more conservative view than the management of the corporation concerning the prospect that a return as high as this will be realized, it may decline to undertake a stock issue. When the long-term interest rate is high, therefore, corporations may find it difficult to float new issues even before any downward movement of stock prices has set in. Moreover, operators in the stock market are much more likely to look upon the discount rate as a barometer than are entrepreneurs. A rise in the rate may lead to more pessimistic

[25] A detailed study of the rules of behavior followed by well-managed investment houses is badly needed.

anticipations about future dividends and check the rise in stock prices,[28] or even lead to their fall. (As a matter of historical record the decline in stock prices tends to precede the decline in business activity.) In periods when stock prices are declining or are expected to decline in the immediate future, investment houses will generally refrain from floating new issues. It is thus conceivable that the capital market may "dry up" simply as the result of a rise in the discount rate to a level which induces the market to take a pessimistic view of the future.

V. Summary

The preceding discussion leads to these conclusions:

1. That in a dynamic world a change in the (short-term) interest rate will not affect the calculations of a trader (or a manufacturer) in such a way as to induce him to reduce or increase his inventory holdings;
2. That a change in the (long-term) interest rate is not likely to influence investment decisions in manufacturing industry;
3. That, under certain circumstances, a change in the (long-term) interest rate may affect investment decisions in the area of public utilities (including railroads) and residential construction; and
4. That, under certain conditions, the level of the interest rate affects the readiness of financial institutions to grant credit or to float bonds and stocks, so that the interest rate may influence the volume of investment even without changing the profit calculations of entrepreneurs.

Interest rates have remained approximately stable for more than a decade. It seems that the Treasury is intent on keeping them at their present level indefinitely. Whether such a policy is possible in the long run cannot be decided here. If it is, this article may be no more than a necrologue.

[28] The stock market boom in the late twenties proves, however, that this is not always the case.

IS A RISE IN INTEREST RATES DESIRABLE OR INEVITABLE?

By Lawrence H. Seltzer*

A view that is vigorously voiced by some respectable students of monetary and fiscal policy,[1] and one that is fearfully shared by many less articulate but responsible bankers, economists, and business men may be outlined roughly as follows:

(1) The extremely low level of interest rates that has prevailed in the United States during the war has forced the banking system to absorb huge quantities of government securities because the latter could not be sold to bonafide investors at the prevailing low rates. The result has been a vast increase in the amount of currency and bank deposits outstanding, and the consequent creation of a grave menace of inflation.

(2) The level of interest rates has been artificially depressed and maintained by Federal Reserve policy and is bound to rise substantially before long. Federal Reserve policy will have to be reversed and interest rates raised sharply if we are to prevent the development of drastic inflation; and interest rates will soar anyhow if inflation comes. In short, substantially higher interest rates are inevitable, whether these are brought about by inflation itself or by the government's attempts to avoid it.

(3) An immediate tightening of the money market and increase in interest rates, accompanied by the funding of most of the federal debt into long-term obligations, would constitute an effective attack against the inflationary danger. At higher interest rates the public could be expected to save more and to use much of its idle currency and bank deposits to buy back governments from the banks. Excess currency and bank deposits would thereby be extinguished.

Because some such structure of thought exists in the minds of many

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[1] See Benjamin M. Anderson, "Inflation Control and Treasury's Borrowing Policy," *The Commercial and Financial Chronicle*, October 18, 1945 (Vol. 162, No. 4430); and "The Road Back to Full Employment," in *Financing American Prosperity* (a symposium edited by P. T. Homan and F. Machlup [New York, Twentieth Century Fund, 1945]), pp. 44-52.

economists and business men—although some of them only fear that it *may* be correct—it should be useful to subject these views to critical analysis. This is done in the following pages. At the outset, however, I think it well to summarize my net position: I agree that the present situation holds inflationary possibilities. I disagree with the foregoing diagnosis of the underlying cause. I doubt the effectiveness of the proposed remedy. I disagree with the view that a substantial rise in interest rates is inevitable.

1. *Character of the Existing Danger of Inflation*

The existing inflationary danger is due to the combination of a vast increase in the quantity of liquid assets possessed by the public and great shortages of desired goods. The liquid assets are of three kinds: currency, bank deposits, and government securities. The gross deposits of Federal Reserve member banks on June 30, 1945 were 3.3 times those of mid-1929, and about 2.3 times those of mid-1940. The amount of money in circulation was six times that of 1929 and 3.4 that of 1940. And in addition, between June 30, 1940, and June 30, 1945, individuals, business firms, and state and local governments had added approximately 80 billion dollars of highly marketable or redeemable federal securities to their holdings. The total of currency, bank deposits, and government securities held by the general public at the middle of 1945 (excluding the holdings of the federal government, banks, and insurance companies) was more than three times the amount held five years earlier.

Great shortages now exist not only in consumers' goods but also in business inventories, housing, and business equipment. The combination of such shortages and the public's possession of enormous liquid assets is favorable to price rises because it may induce the public to increase its spending faster than civilian goods become available. If the public decides to go on a buying spree, it has the means to do so.

The increase in liquid assets does not make a marked inflation inevitable, however. There is no mechanical relationship between the amount of currency, bank deposits, and other liquid assets owned by the public and the price level or price movements. Idle currency and idle bank deposits do not bid up prices. Someone has to spend to do this. The amount of cash and other liquid assets possessed by the public constitutes only one of the factors that influence the rate of the public's spending. The state of its confidence or expectations about the future, and the value it places upon the convenience and security of a high level of liquid assets, are just as important.

The increase in private spending may be moderated by the continuance of rationing and other direct controls, and by caution induced

by cancellations of government orders, reconversion unemployment, etc. Further, the rate at which the desired supplies of civilian goods become available will be important in determining whether and how much prices move up. The increase in private spending may conceivably be fully offset by the combination of a sharp decline in government outlays and a rapid expansion in the output of civilian goods and services.

2. *Only Heavier Taxation Could Have Prevented the Great Growth in the Public's Liquid Assets*

The only kind of fiscal policy that could have prevented a great growth in the public's liquid assets during the war would have been taxation drastic enough to balance the wartime budgets. When current income is taken from the people in taxes, the transaction is complete. A tax receipt does not add to a man's liquid assets. But any kind of government borrowing, whether it be long- or short-term, from individuals or from banks, and at low or at high interest rates, increases private wealth and private ability subsequently to increase spending.

The primary function of a tight money market and high interest rates is to discourage and curtail borrowing. But the only really large borrower during the war has been the United States Government, and no practicable rise in the level of interest rates would have reduced its wartime borrowing and spending. Regardless of interest rates, the amount of military expenditures was limited only by the country's ability to produce; and there is no reason to believe that Congress would have imposed heavier taxes if the long-term rate of interest had been 3½ instead of 2½ per cent or one-year money had commanded 2½ instead of ⅞ per cent. There was no need to tighten the money market for the purpose of restricting credit extension to business because priorities, rationing, and inventory controls removed the incentives for unnecessary borrowing by business.

A higher rate of interest would not have slowed down the growth of the public debt nor the growth in the public's liquid assets.

3. *The Increase in Currency and Bank Deposits Largely Reflects the Public's Desire to Hold Its Savings in Cash*

Many persons make the mistake of assuming that the sale of government securities to the banking system and the consequent increase in currency and deposits measure the extent to which savings have been deficient. They ignore the conspicuous fact that numerous savers prefer to accumulate sizable amounts of their savings in the form of currency and bank deposits. Savings were greatly stimulated during the war by the rise in incomes and by the limitations upon the supplies

of desired goods. But much of the saving was done by persons unused to the purchase of securities. These people naturally put only a portion of their surpluses into Treasury Bonds, and kept the remainder in cash. Others, remembering what happened to the prices of Liberty Bonds after the last war, were afraid of price losses in the case of marketable securities, and of the possibility, often baselessly rumored, that the government might refuse to redeem the Savings Bonds on demand. Many other people expected the war to end at any time and wanted to keep their funds instantly available. Besides these factors, the great growth in output, payrolls, and taxes during the war increased the ordinary needs for currency and bank deposits for use in day-to-day transactions and as pocket and till-money reserves.

The sale of securities to the banking system constitutes our principal means of creating currency and deposits to supply all such increased demands. In addition to the bank purchases needed to enlarge the supply of money for transactions purposes, the banks, in effect, bought large amounts of government securities in lieu of the savers who preferred to hold cash. The current savings of the public are not necessarily one bit less when they take the form of bank balances and currency rather than government securities.

4. *The Possession of Large Amounts of Government Securities by Weak or Unwilling Holders Can Encourage Increased Spending Just as Much as Cash*

It is true that the ordinary investor finds government securities less liquid than currency and bank deposits and is more likely to hang on to them than to keep idle cash. But the difference between a man's holdings of cash and governments is only one of degree. This is particularly true when governments are sold in very large amounts to all classes of the public, including investors whose surpluses are only temporary and who do not ordinarily invest in securities. The governments are then widely regarded as potential cash. After the last World War a considerable part of the Liberty Bonds previously purchased by corporations and individuals was quickly sold and the proceeds spent. Even many experienced and customary investors feel that they make a less permanent commitment when they buy governments than when they buy corporation bonds and stocks. In fact, nearly all investors are likely to feel and act as though their liquid assets are expanded when they first add to their holdings of government securities. The result is that even when a recent purchaser of them does not actually sell his governments, he feels that his holdings of them reduce his needs for cash reserves and place him in a position to spend his current income

and his cash balance more freely. This increased feeling of liquidity exists wherever the new holdings are not regarded as permanent.

If the Treasury had pursued a high interest rate policy from the outset of the war, most of the existing inflationary danger would nevertheless exist. Higher interest rates might have induced the public to put more of its savings into Treasury obligations and less into currency and bank deposits. The extent to which this would have been brought about by a 3½ per cent instead of a 2.5-2.9 per cent long-term rate is debatable. But in any event, the increase in what most of the public regards as its liquid assets would have been no less. Larger amounts of bonds would be held by wage earners, salaried employees, and business corporations as only temporary holdings to be turned into cash and used for goods as soon as the latter became available.

An interest rate that was high enough to cause the public to prefer more Treasury Bonds to bank deposits when goods were unobtainable would not necessarily be high enough to cause the public to keep the bonds after these goods became available. Our experience during the last World War provides a good case in point. The Treasury then paid 4¼ per cent for long-term money as compared with high-grade corporate bond yields averaging between 3.3 and 4 per cent in 1900-13, and 4.05 per cent in 1916-17. Giant Liberty Bond rallies, reinforced by the availability of virtually unlimited bank credit for the financing of Liberty Bond purchases, resulted in a wide distribution of the bonds among individuals and business corporations. The direct sales of Treasury securities to banks were relatively much smaller than in this war.[2] But when goods again became available and the patriotic pressures of wartime were no longer operating, thousands of investors reverted to their previous patterns of spending and saving. In the two years immediately following the end of hostilities, wartime purchasers dumped millions of dollars worth of the bonds on the market at large discounts. High yields did not keep these investors from cashing their bonds. The average yield on United States Government Bonds rose to 4.63 per cent by January 1919, to 4.93 per cent by January 1920, and reached 5.67 per cent in August 1920. The commercial banks expanded their holdings of governments by about 2 billion dollars or approximately two-thirds, between the middle of 1918 and the middle of 1919.

[2] Extension of bank credit to finance bond sales to individuals and corporations was relatively greater in the First World War than in the Second. Everyone was encouraged to "Borrow and Buy," and the banks liberally financed Liberty Bond purchases by their customers, whereas this was discouraged during World War II. In addition, relatively larger amounts of bank credit were required to finance manufacturers awaiting payments from the Treasury. The speedier payments during World War II, including large amounts of advance payments, have had the effect of substituting Treasury borrowing from banks for bank loans that would otherwise have been made to corporations.

5. The Usual Conditions for an Effective Use of Tighter Money Are Not Present

A substantial tightening of the money market—which means both a sharp reduction in the availability of credit and a marked rise in interest rates—has been the chief weapon of the central banking authorities against an inflationary boom. Even in the absence of deliberate action by the authorities, it has usually occurred in the later stages of a boom because of the growing shortage of credit. In either case there is little doubt that it has tended in the past to restrict or halt inflationary booms, though not always promptly.

Nevertheless, I am forced to conclude that any moderate or tolerable use of this mechanism on an over-all basis would be of very limited effectiveness in the present situation and would be capable of introducing extremely adverse complications of its own.

Tightening the general market can be very effective against an inflationary boom based upon short-term speculative borrowing. The ability of speculators to continue to bid prices up and to accumulate greater inventories usually depends upon their ability to expand the scale of their borrowing. When the central banking authorities tighten the money market by limiting the growth of or actually reducing the reserves of the commercial banks, the latter are forced to refuse accommodation to new would-be borrowers and/or to reduce the credit extended to established customers; and in this process interest rates rise in reflection of the diminished supply of credit. Both the increased cost of borrowed funds, and, more particularly, the diminished availability of credit, force borrowers to liquidate portions of their inventories and to curtail the scale of their commitments in order to reduce their debts. The speculative markets, which are highly sensitive to the cost and availability of bank credit, are normally the first to be affected, but the pressure to liquidate and to reduce debts eventually spreads out in many directions. A period of liquidation and contraction displaces the boom.

But these usual purposes of a tightening of the money market have no direct relevance to the present situation:

(a) The principal user of bank credit, the United States Government, will not be moved by the appearance of higher interest rates to reduce its demands for accommodation. Unlike individual business borrowers, the government would not find it possible to respond to a higher interest rate by paying off any considerable part of its borrowings with the proceeds of inventory liquidation, etc. Nor would any practicable increase in the rate of interest cause Congress to reduce government expenditures and increase the scale of taxation sufficiently to make early large reductions in the public debt.

(b) The unprecedentedly large amount of currency and bank deposits now owned by the business and consuming public is mostly owned outright. The owners do not owe large offsetting sums to the banks. They do not need to renew loans at the banks to keep their cash. In effect, they own unborrowed "excess reserves." Their ability to spend for business and consumption purposes is therefore insulated in considerable degree against the effects of tighter money. Only *borrowers* need to pay the higher rates and face the credit curtailment of a tighter money market.

(c) But ample credit accommodation may nevertheless be needed by some businesses to facilitate reconversion and rising production. Even though industry as a whole appears to have abundant liquid resources, the distribution of them may be spotty. To expand bank credit to enable various enterprises to make disproportionately large increases in civilian output would be anti-inflationary rather than inflationary in its net effects. An over-all restrictive credit policy, on the other hand, would be capable of impeding the growth of output of such enterprises without being highly effective against the undisciplined spending of the huge unborrowed cash balances.

(d) The expansion of consumers' credit might conceivably be checked somewhat, but this type of credit is far better regulated directly and by itself, as under the existing wartime method. It does not lend itself well to regulation by a general tightening of the money market. The consumers' demand for credit is relatively insensitive to ordinary changes in interest rates, and the supply of consumers' credit is likely to remain abundant in the face of curtailment elsewhere. The cost of money to the merchant, finance company, or bank extending the credit accounts for only a modest and sometimes tiny fraction of the gross charge paid by the customer. The gross margin of profit is therefore great. It represents heavy overhead costs as well as variable costs and profits. A strong motive therefore exists to provide abundantly for consumer credit by outbidding competing uses to the extent necessary. The record of this type of credit since 1929 has been so satisfactory from a risk standpoint that the larger consumers' finance companies could doubtless increase substantially the sale of their obligations, secured by installment contracts, to individuals with idle bank balances if the banks themselves curtailed their own takings of them. The nominal volume of bank deposits would not be enlarged if this were done, but an increase in spending would be just as effectively financed.

6. *The Secondary Restrictive Effects of a Moderate Tightening of the Money Market Are Not Likely to be Substantial under Present Conditions*

Granted that a general tightening of the money market under present

conditions would not operate through its usual effects upon borrowers, would it not moderate inflationary tendencies significantly by curtailing spending in other ways? Higher interest rates might exert such effects

(a) by promoting greater saving of current income and accumulated cash balances by both consumers and business;

(b) by discouraging the sale of government securities from the public to the banks and the further expansion of bank credit in the process; and

(c) by inducing the public to use part of its idle currency and bank deposits to buy governments.

Let us examine each of these possibilities:

(a) It seems safe to say that moderately higher interest rates would not significantly influence the public to reduce its spending either from current income or from accumulated cash balances. In the short run the amount saved from current income is predominantly determined by habits, institutional practices, the amount and distribution of income, and the availability of desired goods. Consumers do not decide to do without washing machines or automobiles or more clothing because the rate of interest obtainable on government bonds rises from 2½ to 3½ or 4 per cent. Their disposition of their wartime accumulations of liquid assets between consumption spending and saving will also be largely governed by factors other than the rate of interest.

Nor would a moderate rise in interest rates be likely to curb business spending materially. Corporations with big cash balances and bright business prospects are not apt to be induced by this development to stop replenishing inventories or remodeling plants, and instead, to hang on to their cash or to buy government securities with it. Nor would they be moved to pay out noticeably less of their profits in dividends to stockholders. The only ones that would be appreciably affected would be those owing short-term debts to the banks. Even these would be induced to curtail their spending significantly only if the amount of bank credit available to them were curtailed, for a rise in interest costs would mean a negligible increase in total costs for most business enterprises. And banks have lots of low-yield short-term governments that they could sell or fail to replace at maturity in order to get funds with which to maintain and even increase the relatively modest amount of bank credit now extended to business.

(b) It may be argued that a rise in interest rates, by depreciating the market value of government securities, putting some of them below par, would at least have the effect of discouraging holders from selling them and spending the proceeds.[3] Since the banks would pre-

[3] See, for example, H. S. Ellis, "Economic Expansion through Competitive Markets," in Homan and Machlup, editors, *op. cit.*, pp. 143-44.

sumably have to absorb much of such liquidation, any reduction of it would lessen the further expansion of bank credit.

An examination of the distribution of ownership of government securities throws serious doubt on the possibilities in this direction. The distribution as of June 30, 1945, is outlined in the following table.

OWNERSHIP OF THE FEDERAL DEBT, JUNE 30, 1945[a]

	Billions of dollars	*Percentage of total*
Individuals		
E Savings Bonds	29	11.3
A–D, F, G Savings Bonds, Tax and Savings Notes	12	4.7
Other securities	18	7.0
Total	59	22.8
Other non-bank investors		
Federal agencies and trust funds	25	9.7
State and local governments	5	1.9
Insurance companies	23	8.8
Mutual savings banks	10	3.7
Other corporations and associations	30	11.8
Total	92	36.0
Commercial banks	84	32.7
Federal Reserve Banks	22	8.5
Total, all holders	257	100.0

[a] Includes direct and guaranteed obligations; figures for distribution among holders are based upon estimates of the Treasury Department contained in the Treasury Bulletin. Slight discrepancies between the detailed figures and the totals are due to rounding.

It will be noted that insurance companies and mutual savings banks, which buy mainly for permanent holding, accounted for about 12 per cent of the debt; federal agencies and trust funds, about 10 per cent; and the commercial and Federal Reserve banks, about 41 per cent. None of these classes of holders would govern its spending significantly by the market values of government securities. They account for 63 per cent of the debt.

But relatively little of even the remaining 37 per cent of the debt was held by investors whose decision to liquidate their holdings for current spending would be apt to be reversed by the psychological deterrent to selling out at a loss. The remaining 37 per cent was held by individuals to the extent of 23 per cent, and by business corporations and state and local governments to the extent of 14 per cent. Of the 59 billion dollars of governments held by individuals on June 30,

1945, 41 billions, or 70 per cent of the total, consisted of Series E and other United States Savings Bonds.[4] The holders of such bonds can suffer no depreciation in price by reason of an advance in open market interest rates because their bonds are redeemable at fixed prices on demand. (The redemption values of Series G Savings Bonds decline slightly during each of the first twenty-one semi-annual periods to reflect the relatively excessive interest disbursement made currently.)

Moreover, significantly higher and rising yields are already provided for holders of Savings Bonds to induce them to retain their holdings to maturity. A man who has held his E bond for three years is already offered a yield of 3.58 per cent for the remaining period to maturity; at five years, the yield to maturity is 4.01 per cent; at six and one-half years, 4.36 per cent; etc. The corresponding yields for F bonds are 3.07, 3.27, and 3.31 per cent, and for G bonds, 3.13, 3.32, and 3.34 per cent. No additional stimulus for the retention of Savings Bonds would be provided, therefore, by a moderate rise in interest rates unless the whole schedule of yields on outstanding Savings Bonds were raised, and even then the psychological deterrent against selling out at a loss would be absent.

So far as individuals are concerned, then, the psychological deterrent to selling out at a loss and spending the proceeds would be confined to the 30 per cent of their holdings—7 per cent of the total debt—that is in the form of marketable securities. And the *marketable* securities held by individuals are held mainly by members of the upper income groups who are less likely than holders of E bonds to liquidate for the purpose of increasing their current spending.

Price depreciation as a deterrent to the sale of government securities would appear to offer no greater promise of effectiveness in the case of business corporations. Treasury Savings Notes, which account for about one-third of the aggregate of Treasury obligations held by business corporations, may be cashed at fixed prices on demand and therefore could suffer no depreciation from a rise in market yields. Nor would corporate holdings of Treasury certificates of indebtedness and other short-term obligations be greatly affected. A moderate depreciation in market price would not be highly effective against sales of even 2's, 2¼'s, and 2½'s by manufacturing and mercantile corporations intent on financing reconversion and expansion. Investment companies might be induced to hold on to more governments rather than to switch them into other securities, and the same might be true of a portion of the holdings of state and local governments; but little more than this could be expected.

[4] Including Treasury Tax and Savings Notes.

On balance, the prospective effect of a moderate depreciation in market values as a deterrent to the sale of government securities and the spending of the proceeds is not impressive.

(c) Moderately higher interest rates might have some influence in inducing the public to use part of its idle currency and bank deposits to buy additional governments. The purchases might consist of new Treasury issues or securities bought from the banks. The effect would be either to reduce the amount of currency and deposits or to lessen the increase that would otherwise take place.

How large an effect of this character would be produced by a moderate rise in interest rates cannot be confidently predicted. There have been no comprehensive empirical studies of the responsiveness of investment to changes in interest rates, so far as I am aware. In the early part of 1937, when an increase of one-third in member bank reserve requirements took effect, superimposed upon a previous 50 per cent increase in the preceding year, and when sitdown strikes were occurring in the automobile industry, and bank loans were expanding, the average yield of all Treasury Bonds not due or callable for twelve years or more rose from 2.46 per cent at the beginning of the year to 2.83 per cent early in April. The yield of nine-months Treasury bills went from .32 to .67 per cent, and the average yield of 3-5 year Treasury notes, from 1.13 to 1.65 per cent, in the same period. The member banks reduced their holdings of government securities, direct and guaranteed, by 856 million dollars in the first six months of the year and by an additional 318 millions in the second six months. Insurance companies and mutual savings banks increased their holdings of governments during the year by approximately 1 billion dollars, and the Federal Reserve banks by 134 millions, accounting for substantially all the bank liquidation. (Non-member commercial bank holdings were virtually stationary.) Non-bank investors, however, absorbed the whole of the 1,168-million-dollar increase in the interest-bearing public debt held outside of federal agencies and trust funds.

Interest rates declined thereafter and by the end of the year were little above those of the beginning. (The Treasury bill rate went much lower.) Bank holdings of government securities continued to decline during the first six months of 1938. For the eighteen months of declining bank holdings as a whole, the net decrease of 1,292 millions in the governments held by commercial banks was more than absorbed by the 1,440 millions taken by insurance companies and mutual savings banks. The 600-million-dollar net increase in the interest-bearing public debt held outside of federal agencies and the Federal Reserve banks was taken wholly by non-banking purchasers of non-marketable securities and by insurance companies and savings banks. There was no net

increase in the holdings of marketable Treasury securities by non-institutional investors for the eighteen months as a whole.

It is possible to draw the inference from the figures for the first half of 1937 that the non-institutional demand for governments might be somewhat, though not impressively, responsive to a moderate rise in yields, though little weight can be placed upon the evidence of a single short period. The sharpness of the price decline in governments attracted a considerable amount of speculative buying motivated by the hope of profit from price recovery rather than by the larger investment yields as such. A new plateau of higher yields would soon lose the demand from this quarter. Actually, the holdings of marketable governments by non-institutional investors in June, 1938, were back to the level of December, 1937.[5] The 2.90 per cent yield on United States Savings Bonds, on sale continuously since 1935, offered a higher return for moderate amounts of investment funds than the highest yields reached in the 1937 decline, and still does. The limits of $7,500 (issue price) annually on Series A-D Bonds, issued between 1935 and 1941, and of $3,750 on the present Series E, have probably constricted the flow of funds into these issues from wealthy individual investors, although we must not lose sight of the common practice of widening the effective limits by the purchase of the maximum amount annually in the names of each of several members of a family. Since 1941, Series F and G Savings Bonds, yielding 2.53 and 2.50 per cent, respectively, have been available up to $100,000 (issue price) annually for the combined series ($50,000 in the calendar year 1941) for each investor. These considerations are relevant mainly for the motivation of individual investors and ordinary business enterprises. Institutional investors, with short-period exceptions, tend to invest their funds at the going rates just about as fast as they come in. In the absence of better evidence than is now available, we cannot count on more than a modest, if any, responsiveness of investment to a mild rise in yields.

If the reserve position of the banks were made so tight that they could absorb no more governments, sales would continue to be made by some parts of the non-bank public to other parts. The accompanying rise in yields could not be relied upon to slow up spending. Those who insisted upon selling in order to spend would merely acquire and use the previously inactive balances of those who purchased their securities. And even if a moderate amount of bank balances were actually destroyed by being used to purchase governments from banks, the rate of current spending would not be likely to be reduced materially. The idle or less active balances of depositors would be the most apt to be

[5] *Banking and Monetary Statistics,* Board of Governors of the Federal Reserve System (Washington, 1943), Table 149, p. 512.

converted. Few persons or business enterprises would feel poorer or markedly less liquid for having converted part of their cash into government securities. The net effect might be mainly that depositors would turn over their remaining cash balances more rapidly than before, with no significant curtailment in their rate of spending. That is how we used to finance our spending when interest rates were higher and cash balances smaller. The high rates on short-term investments—2 per cent was frequently obtainable on demand deposits—and the short supply of cash relative to income, price level, etc., provided nearly everyone with a distinct inducement to minimize his idle cash, but the volume of spending was not correspondingly, if at all, reduced because the remaining cash balances were turned over more rapidly. With very low interest rates and a greatly enlarged supply of cash, this inducement disappeared. Much of the increase that has taken place in currency and bank deposits in recent years has been "absorbed" in the maintenance of larger idle balances. A reduction in the size of these idle balances would by no means force a reduction in spending. And it is spending, not the nominal number of dollars outstanding, that bids prices up.

The various considerations cited in the foregoing have led me to conclude that a moderate rise in interest rates, reflecting a moderate restriction of bank credit, would be ineffective for precautionary purposes, and would be ineffective as an attack even upon the actual development of an inflationary rate of spending if the latter did not owe much to an expansion of direct bank lending to business or of new capital flotations.

Yet even a moderate rise in interest rates would be very unsettling and capable of quickly getting out of control. Once the movement became well started, no one would know in advance that it would be confined to moderate proportions (unless this were officially announced, in which case much of the efficacy would be sacrificed). All anyone could be sure of was that the long-established policy of low or declining interest rates had been withdrawn. Disorderly selling in considerable volume might develop, necessitating large-scale market support by the Federal Reserve System to avoid sharp price declines.

7. *A Sharp Rise in Interest Rates Would Be Dangerous*

While a moderate rise in interest rates, reflecting a moderate restriction in the availability of credit, would be likely to be ineffective in curtailing the aggregate rate of spending, a sharp and substantial rise—say, to a level of 5 or 6 per cent for governments—would be another matter. Such a rise might well dampen inflation both because of the effects of the rate rise as such and because of the degree of credit restriction it would reflect. It is also capable of having the opposite

result, however, if the rise were widely interpreted as reflecting upon the credit of the federal government. A rise of this magnitude would by no means be impossible for a temporary period, even in the absence of deliberate policy. Such a rise could readily occur if the bond market were permitted to become demoralized by a curtailment of member bank reserves and were not supported against the panicky selling of banks and others. But a radical rise in interest rates would be highly dangerous on several counts:

(a) There is the danger just noted that it would be widely interpreted as reflecting upon the credit of the federal government, with the result that the fear of inflation, and therefore the possibility, would be accentuated. On a 5 per cent yield basis our 2½ per cent long-term Treasury's would be selling in the early and middle 60's; our 2¼'s, in the early 70's; and even an 8-year 2 per cent would be selling nearly 20 points under par. For large parts of the public, such discounts would not be interpreted merely as a reflection of a tighter money situation, but as strong evidence of the impaired credit of the government. The totals of our public debt, currency in circulation, and bank deposits are now so strikingly greater than ever before as to be capable of lending color to ill-founded rumors and interpretations conducive to a loss of confidence in the currency. In short, although the net effects of a radical rise in interest rates would more probably be distinctly deflationary, as noted in the next paragraph, the risk of an undisciplined opposite reaction, arising from a loss of confidence in the Treasury and the currency, would be real.

(b) There is great risk that the deflationary effects of a radical rise in interest rates might be so severe as to throw the whole economy into a crushing business depression. Such a rise would cause drastic depreciation in the market values of all types of securities. It is six years since Aaa corporate bonds have yielded more than 3 per cent, or long-term U. S. governments more than 2½ per cent. A rise in yields to the neighborhood of 5 to 6 per cent would play havoc with institutional portfolios. It is no doubt true that if the rise were "permanent," the earning power of banks and other institutions would be correspondingly increased and that the enhanced earning power, viewed rationally, would far more than compensate for the shrinkage in asset values, as has been pointed out recently by Paul A. Samuelson.[6] But who could say how long the new level would last, or that a particular bank would not be forced to realize heavy capital losses? Moreover, bankers and their customers, and indeed the public as a whole, live by the established bookkeeping conventions, which adjudge an enterprise insolvent

[6] "The Effect of Interest Rate Increases on the Banking System," *Am. Econ. Rev.*, Vol. XXXV, No. 1 (Mar., 1945), pp. 16-27.

if the market value of its balance sheet assets is less than the market value of its balance sheet liabilities. Even if valuation conventions, generous lending, and other procedures by the Reserve banks and federal agencies succeeded in insulating the formal balance sheets of banks and insurance companies from the effects of the price declines, disrupting shifts of deposits from small and medium-size to big banks, stimulated by fear, might well take place, as they did in 1930-33, and public suspicion of the solvency of financial institutions generally incited. Stock prices would decline sharply, with damaging effects upon business confidence and the opportunities for corporate financing.

(c) The political repercussions of a radical rise in interest rates could easily be destructive of our existing machinery for credit control. In view of the whole new framework of thought stressing the long-run desirability of low interest rates, which has gained widespread adherence since 1929, and of the importance of low interest rates to various public programs and to farmers and home-owners, and of the consequences of a sharp rise in interest rates to financial institutions and to the budgetary problem of the federal government, I can think of no important group in the country that could be expected to support a policy of permitting or bringing about such a rise. With a public debt that will shortly approximate 275 billion dollars, an increase of 2 per cent in the level of interest rates would mean the prospect of an ultimate increase in interest costs to a total of more than 11 billions a year. Both Congress and the Executive could be expected to combat strenuously any such prospect and would be likely to interfere with the powers or personnel of the Federal Reserve System in the process.

(d) So long as the greater part of bank earnings is derived from interest on their government securities, the banks would get into an increasingly vulnerable political position as interest rates rose. Already there is considerable criticism on this score. The net profits of the member banks in 1944, 649 million dollars, were substantially larger than in any previous year and about two-thirds larger than in 1941. The increase was due primarily to the growth in their holdings of United States securities. The rate of net profits on their capital accounts rose from 6.7 per cent in 1941 to 9.7 per cent in 1944, when it was nearly as high as in the previous peak years of 1919-20. Their earnings from securities more than doubled between 1941 and 1944. The average rate earned by the banks on securities in 1944 was about 1.5 per cent.[7] The wartime boom in bank earnings differs from that in many other industries in that the supporting conditions will not disappear with the end of the war—the earning assets of the banks will

[7] *Federal Reserve Bulletin* for May, 1945, pp. 429 *ff*.

continue at substantially their present level or will increase. Further, reductions in corporate income and excess profits taxes are capable of adding sizable additional amounts to bank earnings.

8. *The Problem Is Not Yet Solved*

In pointing out the reasons why a rise in interest rates would be ineffective if we succeeded in confining it to moderate proportions, and clumsy and dangerous if we allowed it to become substantial, I do not mean to suggest that a problem does not exist or that nothing can be done about it. A problem does exist, or rather two related problems: the broader problem of inflation, and the narrower problem of the government bond market and the relationship of the banking system to it.

(a) *The inflation problem.* I think I have sufficiently indicated that the inflation problem confronting us in the early post-war period is primarily a problem of controlling the rate of spending of already-existing, unborrowed funds owned by the business and consuming public. A moderate rise in the rate of interest on borrowed funds does not attack it effectively and may get out of hand.

The problem may at some time also become one of restraining an undue expansion of bank lending to business. But in this case, too, it is difficult to see how a moderate use of the traditional kind of over-all credit restriction could be expected either to be adequately effective against the particular target at which it was aimed or to avoid adverse and possibly long-lasting effects upon other types of credit. Such over-all credit restriction would not be likely to be highly effective against an expansion of direct bank loans to business so long as the banks possess large amounts of government and other highly marketable securities which they can liquidate to replenish their reserves when necessary. The initial effect, at least, would be apt to be felt most in the bond market, particularly the government bond market.

Similarly, moderately tighter credit, with moderately higher interest rates, would hardly offer the most appropriate remedy for an inflationary movement that obtained its chief impetus from the federal deficit. What is primarily needed in such a situation is diminished governmental spending or greater taxation or both, rather than tighter money. Whether the deficit is financed by bank credit or by non-bank purchases of securities is of some, but only of secondary, importance.

If inflation should actually get under way, other weapons would be more appropriate and effective in the circumstances now existing than a tightening of the money market. Among these methods are the prompt balancing of the federal budget; the accumulation of budgetary surpluses in the Treasury's account with the Reserve banks or their use

to retire Treasury securities held by the Reserve or commercial banks; aggressive promotional efforts by the Treasury for the retention and continued purchase by the public of Savings Bonds; the continuance, but on a permanent legislative basis, of the present type of Federal Reserve control over installment credit, with such tightening or loosening as seems appropriate to changing circumstances; an increase in the Reserve System's margin requirements on securities even above the present 75 per cent requirement for new purchases, and the application of the higher requirements to the carrying of old accounts; recommendations by the Reserve System to the President and to Congress to slow down the operations of the government's various promotive credit agencies; and, if the war powers are sufficiently prolonged, priorities requirements and price controls might be usefully continued in a few fields.

(b) *The government bond market.* Independent of the broader problem of inflation, but related to it, is that of preserving an orderly market for government securities, and the proper policy to pursue in this connection with respect to bank holdings of government securities. The reasons why this problem might become acute are noted in the next few paragraphs, and the general character of the probable attack on it is indicated in the concluding paragraph.

(1) *The market will face considerable redistribution of ownership and additional offerings.* Now that the Japanese war has ended, the market for government securities may be subject to great, if temporary, strains at any time. The demand will lose the force of the patriotic motive operating in wartime and the powerful support flowing from the near-absence of competing investments. Selling pressure, on the other hand, will appear from many quarters. Many business corporations will liquidate their holdings or fail to replace them as they mature in order to obtain funds to replenish depleted inventories or reconvert plants or exploit new developments. Many individual and institutional investors will reduce their holdings of governments as new issues of higher yielding corporate securities become available. Many holders of War Savings Bonds will turn in their bonds for cash in order to buy automobiles, household furniture, houses, etc. Various banks may wish to sell some of their holdings in order to increase their loans to business.

Moreover, the ending of hostilities has not stopped the Treasury's need for net additional borrowing. We shall face the costs of policing occupied territories in Europe and Asia, of extending aid in the reconstruction of various European countries, of demobilization, and of possible domestic reconstruction programs. The Treasury will doubtless be able to meet some of its maturities, redemptions, and new money

needs by letting its cash balances run down, by liquidating surplus war materials and properties, and by using net receipts of the old-age, unemployment, and other trust funds. But on net balance it is likely to face heavy cash deficits for some time.

The market will have to withstand, therefore, both a considerable redistribution of the outstanding debt and substantial additions to it.

(2) *We cannot rely upon new savings to absorb all offerings promptly.* Over a period of several years the investment demands of insurance companies, savings banks, trustees, and individual investors might conceivably absorb all of the liquidated, refunding, and new securities without a significant rise in interest rates and even with a further fall. But these regular investors are not usually in a position to anticipate their future needs far in advance. Their investment funds come to them in relatively small amounts every day through receipts of premiums, interest, dividends, rents, savings deposits, etc. At any one time they can put into the market only their current receipts and perhaps a small amount of previous receipts, for they do not ordinarily carry large idle balances.

(3) *Only limited support can be expected at first from the war-created cash balances.* With the war ended, the individuals and business enterprises with large cash balances are mainly those whose very preference for cash over securities during the war was principally responsible, in the last analysis, for most of the wartime sales of government securities to the banks, and, correspondingly, for the increase in the total amount of currency and bank deposits outstanding. For if these savers had been willing to buy governments during the war, smaller amounts would have been sold to the banks, and correspondingly smaller additions to currency and bank deposits would have occurred. It is not likely that many of these holders of cash balances will suddenly decide to shift into governments.

Undoubtedly, many of them will be content with smaller balances when priorities and other restrictions on production are lifted. Substantial amounts of cash are now held idle by their owners only because the desired types of goods cannot be had at present but are expected to become available in the not-distant future. As civilian goods become increasingly available, we can expect these holders to spend much of their balances promptly for the replenishment of inventories, deferred repairs and replacements, and for new producers' and consumers' goods. In these cases the cash balances will get into new hands, and to the extent that the successive new owners likewise have pressing desires for goods and services, the balances will be quickly transferred again and again. Unless developments occur to make the owners prefer the maintenance of the wartime levels of cash balances to additional goods

or income-yielding securities, efforts to spend or invest the unneeded amounts will persist. If prices and/or output do not rise sufficiently in this process to take up the slack in cash balances, the excess will tend more and more to get into the hands of persons and institutions readier to buy government securities than the previous holders of the funds. But this will take time.

(4) *The middlemen's services of the commercial banking system will be sorely needed.* In the immediate situation, the middlemen's services of the commercial banks will be sorely needed. Without their intermediation, disorderly and damaging fluctuations in bond prices might easily occur even if underlying conditions remained favorable. For the commercial banks perform services in the government bond market similar to those of dealers and jobbers in other fields in cushioning the effects of sporadic offerings and purchases. They constitute the largest block of immediate purchasers and of wholesalers and retailers of government securities.

But the banks are loaded up with ordinary governments, and in the absence of special stimulation they may not be eager to add large amounts to their holdings immediately. In fact, instead of supporting the market, the banks may at times themselves generate sharp waves of selling either because they fear higher interest rates or to free reserves for commercial lending. The Federal Reserve System will be faced with the dilemma that over-all quantitative restriction of member bank reserves will damage the bond market, but liberal provision of member bank reserves in support of the bond market may lead to undesirable credit expansion.

(5) *Strong Federal Reserve support of the bond market seems inevitable.* In this situation I do not see how the Federal Reserve authorities can decide otherwise than to do everything they can to support the government bond market. The Treasury's influence would certainly be expected to be exerted powerfully to this end, for apart from any theory respecting the continuous desirability of low interest rates, the Treasury will be facing large new and refunding issues for many years to come. The Treasury's maturities of public marketable issues alone during the next five years aggregate 80 billion dollars and during the next eight years they amount to 123 billions. A declining bond market would create difficulties for the refunding operations. Moreover, the tax increases needed to meet even a moderate rise in interest costs, superimposed upon the heavy taxes that will be required for other purposes, would meet great resistance, for they would create additional burdens for the lower income groups and further damage to business incentives. An increase of only one per cent in the average rate of interest would add a greater sum to the federal budgetary

requirements than the total receipts from individual income taxes in any year between 1925 and 1940. The same tax increases that might be tolerated if adopted expressly for temporary periods to combat inflation, with the proceeds available to reduce the public debt, might be intolerable if levied to meet advances in the interest cost of a dead-weight debt. In this atmosphere, the Federal Reserve authorities should not find it difficult to persuade themselves that inflation controls can be exercised more directly and more effectively through other channels. And this, I have argued, is actually the case.

The technical problem confronting the Reserve authorities will be to provide abundant member bank reserves for support of the bond market and yet to prevent these reserves from being used for excessive expansion of bank credit for other purposes. This problem can be attacked by selective credit controls, as previously mentioned, possibly including the use of special Treasury securities for banks,[8] in conjunction with other governmental measures to control the rate of spending.

[8] See Lawrence H. Seltzer, "The Problem of Our Excessive Banking Reserves," *Jour. Am. Stat. Assoc.*, Vol. 35, No. 209 (Mar., 1940), pp. 24-36.

THE CONCEPT OF ECONOMIC SURPLUS

By Kenneth E. Boulding*

Economic surplus may be said to be present whenever a seller makes a sale for a sum greater than the least sum for which he would have been willing to make the sale, or whenever a buyer makes a purchase for a sum smaller than the greatest sum for which the buyer would have been willing to make the purchase. If I am able to sell an article for $10 which I would be willing to sell for $8.00, then $2.00 represents economic surplus. Likewise, if I am able to buy an article for $10 for which I would be willing to pay $13, then $3.00 represents the economic surplus. This concept of an economic surplus has played an important part in economic theory, whether in a simple or in an extended form. It is the basis of the Ricardian theory of economic rent and of the Marshallian theory of consumers' surplus, and is an important concept in welfare economics. It lies at the root also of the Marxian theory of surplus-value.

Economic surplus can arise only where there are differences among the various buyers or sellers of an identical article in respect of their willingness to buy and sell. What is the same thing in other words, it is a phenomenon necessarily associated with less than perfectly elastic demands and supplies. If all the sellers of a given commodity were willing to sell it at a price of $10, the supply would be perfectly elastic within the range of sellers, and no matter what the demand within this range the price would always be $10 and there would be no economic surplus. Similarly, if all buyers were willing to buy a commodity at a price of $10, the demand would be perfectly elastic within the relevant range and, no matter what the supply, the price would always be $10 and there would be no economic surplus. Suppose, however, that some sellers are willing to sell at $9.00, some at $10, and some at $11. If the demand is such that the $9.00-sellers can supply all that is necessary, the price will be $9.00 and there will be no economic surplus. If, however, the demand rises so that the amount which the $9.00-sellers are willing to supply is insufficient to satisfy the buyers at that price, the price must rise to $10 in order to attract the $10-sellers into the market. Then the $9.00-sellers receive an economic surplus of $1.00, for they would be willing to sell for $9.00, but in fact receive

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$10. If the demand rose still further, so that the $11-sellers had to be brought into the market, the price would rise to $11, the $9.00-sellers would have an economic surplus of $2.00 and the $10-sellers of $1.00.

Similarly in the case of demand, if there are some buyers willing to buy the commodity for $11, some for $10 and some for $9.00, and if the supply is so small that at a price of $11 all that sellers will offer will be taken by the 11-dollar buyers, the price will be $11 and there will be no economic surplus on the buyers' side. If, however, the supply is larger, so that the price must be brought down to $10 in order to attract the $10-buyers, the $11-buyers will receive an economic surplus of $1.00. If the supply is still larger, so that the price falls to $9.00 in order to bring the $9.00-buyers into the market, the $11-buyers will receive $2.00 economic surplus and the $10-buyers will receive $1.00 economic surplus. Economic surplus on the sellers' side may be called "sellers' surplus" and on the buyers' side, "buyers' surplus."

The principle is illustrated in a familiar diagram in Figure 1. The "buyers' curve," $B_1 \ldots\ldots b_n$, shows what quantities buyers are just willing to buy at various prices. Thus, at a price OB_1 there are buyers just willing to buy B_1b_1; at a price ON_2, there are buyers just willing to buy an amount B_2b_2; and so on. The total amount that will be bought at the price ON_2 is, of course, $B_1b_1 + B_2b_2$, or N_2b_2, and, as the same principle applies all the way down the curve, the "buyers' curve" is also the demand curve. The demand curve is essentially the *cumulative frequency distribution* of the amounts that people are just willing to buy at various prices. Similarly the "sellers' curve," $S_1 \ldots\ldots s_n$, shows what quantities the sellers are just willing to sell at various prices. It is the cumulative frequency distribution of the amounts that people are just willing to sell at various prices.

The equilibrium price, ON, is that at which all sellers can find buyers for the amounts desired—*i.e.,* at which the quantity offered is equal to the quantity sold. Then the total buyers' surplus at the equilibrium price is measured by the area NB_1P and the total sellers' surplus by the area S_1NP. The buyers' surplus measures the difference between the total amount actually paid by the buyers ($ONPM$) and the total amount which they would have been willing to pay if perfect price discrimination could have been practiced—(*i.e.,* if each unit had been sold at the highest price that anyone was willing to pay for it)—which would be the area OB_1PM. The sellers' surplus measures the difference between what the sellers actually receive ($ONPM$) and the least sum for which the amount OM could be obtained under perfect price discrimination—*i.e.,* if each quantity were to be paid for at a rate only just sufficient to induce the seller to part with it. This is the area

OS_1PM. The sellers' curve is similar to what Marshall called the "particular expenses curve." It is identical with the supply curve only if changes in the willingness to supply due to external economies can be neglected.

This is essentially the "classical" theory of economic surplus. The Ricardian theory of rent appears as a special case: if rent is that which is paid for the "original and inexhaustible powers of the soil," then clearly rent is being paid for something that is perfectly inelastic in supply. In the case of any commodity the supply of which is perfectly inelastic at all prices, the whole payment for the commodity is economic rent; for the commodity would be supplied even if nothing were paid for it.

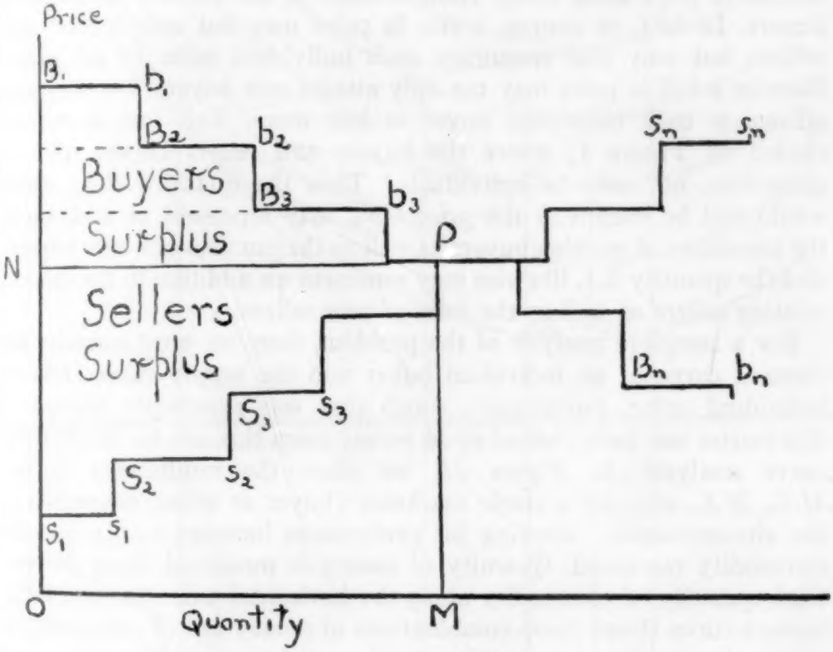


FIGURE 1

Thus in Figure 1, if the sellers' curve were MP, the whole area $ONPM$ would be sellers' surplus—*i.e.*, economic rent. The question of whether any such commodity exists, of course, is a doubtful one: certainly most of the services of land, with the possible exception of the great river-bottoms, are neither original nor inexhaustible. Even the element of *location,* which might seem at first sight to be perfectly inelastic in supply as land cannot be other than where it is, nevertheless is significant only in relation to the location of the human population,

which is perfectly capable of shifting. If, however, there exists any commodity with a perfectly inelastic supply there can be no doubt that the whole payment received for it by its owners would be economic rent.

The exposition is considerably complicated, although not changed in essence, when we consider that demands or supplies may be less than perfectly elastic for two reasons: first, because *individual* buyers and sellers will buy or sell different quantities in response to different prices; and, secondly, because a change in price may affect the *number* of buyers or sellers. This is the distinction between what used to be called, rather vaguely, the "intensive" and the "extensive" margins. In the illustration of the \$11, \$10 and \$9.00-buyers or sellers, it was assumed that the variation in quantities offered or demanded with change in price came solely from changes in the number of sellers or buyers. In fact, of course, a rise in price may not only attract new sellers, but may also encourage each individual seller to sell more; likewise a fall in price may not only attract new buyers, but may also encourage each individual buyer to buy more. This fact is not excluded by Figure 1, where the buyers and sellers curves refer to *quantities*, not only to individuals.[1] Thus the quantity B_2b_2, which would just be bought at the price ON_2, may represent an addition to the purchases of existing buyers as well as the purchases of new buyers; and the quantity S_2s_2 likewise may represent an addition to the sales of existing sellers as well as the sales of new sellers.

For a complete analysis of the problem, then, we must consider the demand curve of an individual buyer and the supply curve from an individual seller. Fortunately, much that was previously obscure in this matter has been cleared up in recent years through the indifference curve analysis. In Figure 2A we show the indifference curves, M_0I_0, M_1I_1, etc., for a single marketer (buyer or seller, depending on the circumstances), showing his preferences between money and the commodity marketed. Quantity of money is measured along the vertical, quantity of commodity along the horizontal axis. Any one indifference curve shows those combinations of money and of commodity to which the marketer is indifferent. Any point on indifference curve M_1I_1 is preferred to any point on M_0I_0: generally, any point on M_nI_n is preferred to any point on $M_{n-1}I_{n-1}$.

We suppose that the marketer has in his possession a quantity OR_0 of commodity and a quantity R_0P_0 of money. The point P_0, therefore, represents his initial position. The problem is: Given a "market"—*i.e.*, a situation in which he can buy or sell any amount of the commodity at a given price—to what point will he move? The line showing what

[1] Marshall does not seem to be quite clear on this point in drawing his particular expenses curve.

FIGURE 2A

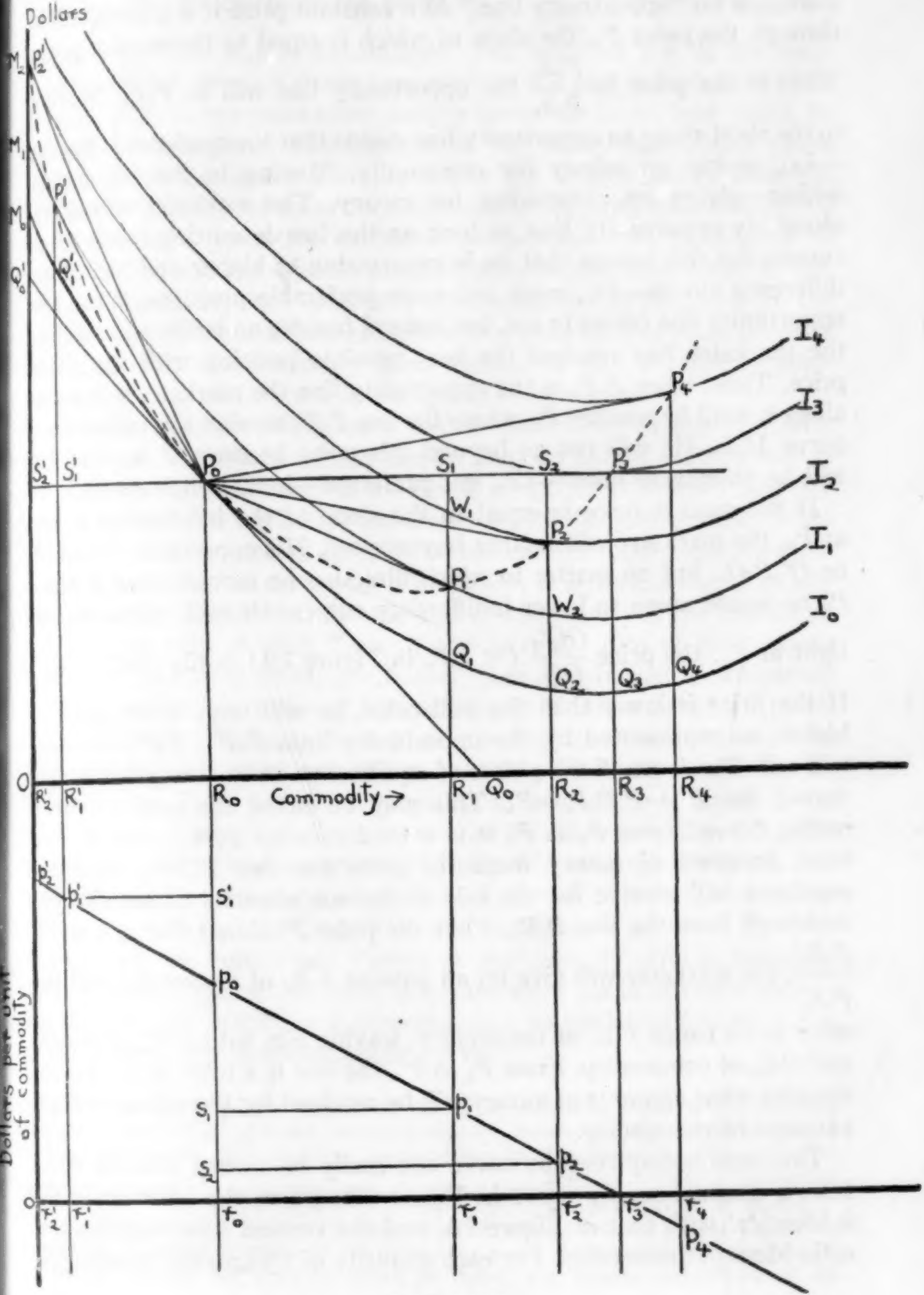


FIGURE 2B

combinations of money and commodity are open to him through exchange is his "opportunity line." At a constant price it is a straight line through the point P_0, the slope of which is equal to the market price. Thus if the price is $\frac{P_1S_1}{P_0S_1}$ the opportunity line will be P_0P_1. Moving to the right along an opportunity line means that the marketer is buying —*i.e.*, giving up money for commodity. Moving to the left means selling—giving up commodity for money. The marketer will move along his opportunity line as long as the line is cutting indifference curves, for this means that he is progressing to higher and higher indifference curves—*i.e.*, more and more preferable positions. When the opportunity line ceases to cut, but instead *touches* an indifference curve, the marketer has reached the best possible position with the given price. Thus, when P_0P_1 is the opportunity line the marketer will move along it until he reaches P_1, where the line P_0P_1 touches the indifference curve M_1I_1. He will not go beyond this point because, if he does, he will be passing to lower—*i.e.*, less preferred—indifference curves.

If the market price is equal to the slope of the indifference curve at P_0, the marketer will neither buy nor sell. His opportunity line will be $Q'_0P_0Q_0$, but no matter in which direction he moved along it from P_0 he would move to lower indifference curves. He will, therefore, sit tight at P_0: the price $\frac{OQ'_0}{OQ_0}$ ($= r_0P_0$ in Figure 2B) is his "null price." If the price is lower than the null price, he will buy: if the price is higher, as represented by the opportunity lines $P_0P'_1$, $P_0P'_2$, etc., he will sell. The locus of the points of equilibrium at various prices is the dotted line P'_2—$P_0P_1P_2$—P_4. This may be called the total revenue-outlay curve. From P_0 to P_3 it is a total revenue curve, showing the total amounts of money measured from the line $P_0S_1P_3$, that the marketer will receive for the sale of various amounts of commodity, measured from the line P_0R_0. Thus the point P_1 shows that at a price $\frac{P_1S_1}{P_0S_1}$, the marketer will give up an amount S_1P_1 of money and will receive in exchange P_0S_1 of commodity, leaving him with R_1P_1 of money and OR_1 of commodity. From P_0 to P'_2 the line is a total outlay curve, showing what amounts of money will be received for the sale of various amounts of commodity.

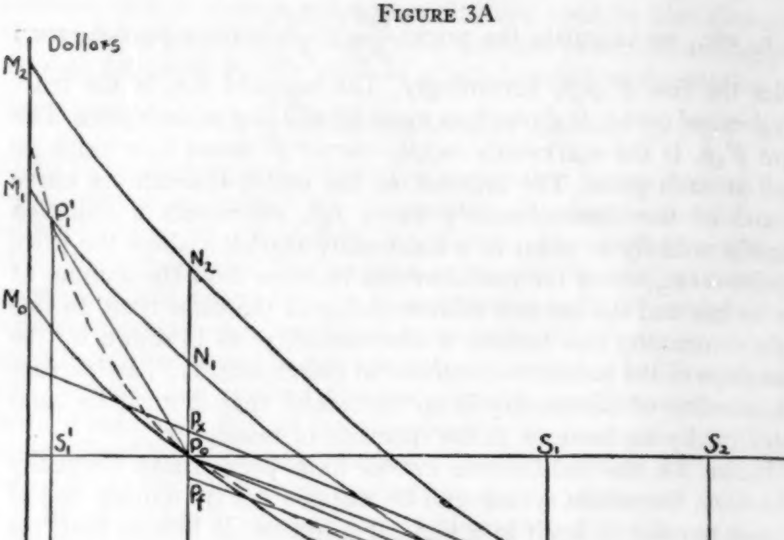
The total outlay-revenue curve can easily be turned into the marketer's demand-supply curve in Figure 2B, where the horizontal axis is identical with that of Figure 2A, and the vertical axis measures the ratio Money/Commodity. For each quantity of commodity represented

by r_1, r_2, etc., we calculate the price, $\frac{S_1P_1}{P_0S_1}$, $\frac{S_2P_2}{P_0S_2}$, $(= r_1p_1, r_2p_2,$ etc.) and plot the line $p'_2p_0p_6$ accordingly. The segment p_0r_3 is the marketer's *demand curve:* it shows how much he will buy at each price. The segment p'_2p_0 is the marketer's *supply curve:* it shows how much he will sell at each price. The segment of the outlay-expenditure curve P_3P_4, and of the demand-supply curve r_3p_4 represents a situation (extremely unlikely to occur in a commodity market) where the price is negative—*i.e.*, where the marketer can increase *both* the amount of money he has and the amount of commodity at the same time. In this case the commodity has become a discommodity, as is shown by the positive slope of the indifference curves: at points such as P_4 an increase in the quantity of commodity is so distasteful that it must be compensated for by an increase in the quantity of money.

In Figure 2A the indifference curves have been drawn vertically parallel—*i.e.*, the whole system can be mapped out by moving one of the curves parallel to itself in a vertical direction. It follows that, for each quantity of commodity, the slopes of all the indifference curves are identical. The slope of an indifference curve is called the marginal rate of substitution of money for commodity: it is the amount of money which must be substituted for one unit of commodity if the individual is to feel no gain or loss. Thus, if the marginal rate of substitution (for short, *MRS*) is \$3.00 per bushel, then if a bushel is subtracted from the marketer's stock of commodity, \$3.00 must be added to his stock of money in order to leave him as well satisfied as he was before. If now the indifference curves are parallel, the *MRS* of all the indifference curves at any given quantity of commodity is equal to the price of the commodity. Thus at a quantity of commodity OR_1, the slopes of the indifference curves at Q_1, P_1, W_1, etc., are the same, and are also equal to the slope of the line P_0P_1—*i.e.*, to the price of the commodity—as P_0P_1 is tangent to the indifference curve at P_1. The *MRS* of all the indifference curves at the quantity OR_1 is therefore equal to r_1p_1 in Figure 2B. That is to say, when the indifference curves are parallel, the *MRS* curve corresponding to each indifference curve is the same as the demand-supply curve.[2]

[2] This condition of "parallel indifference curves" is essentially similar to the condition that the marginal utility of money should be constant, assumed by Marshall in his analysis of consumer's surplus. It is, however, somewhat broader than Marshall's assumption. The *MRS* at any point on an indifference curve is the ratio $\frac{\text{Marginal Utility of Commodity}}{\text{Marginal Utility of Money}}$ (see Boulding, *Economic Analysis*, p. 663). Marshall assumed that for a given quantity of commodity the marginal utility of the commodity would be independent of the amount of money, and that the marginal utility of money was likewise independent of the

FIGURE 3A



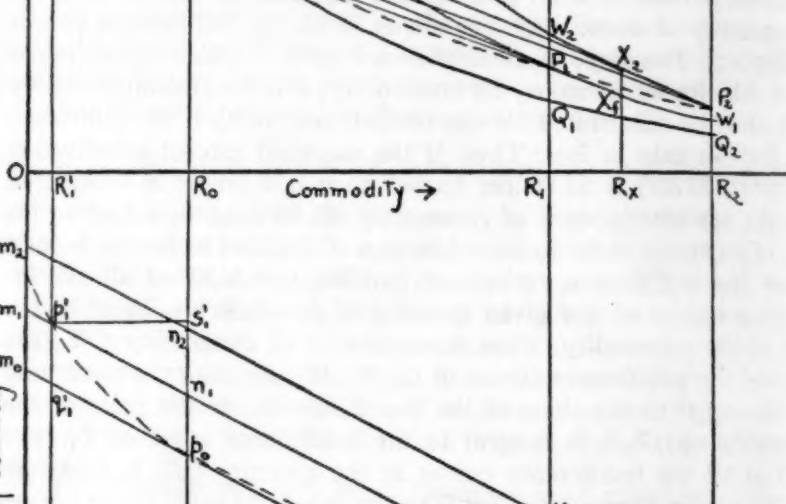


FIGURE 3B

There are several concepts of economic surplus which can be derived from this construction. Perhaps the simplest is the "buyer's surplus" and "seller's surplus," analogous to the Marshallian "consumer's surplus." The buyer's surplus is the difference between what the buyer pays for a given quantity of the commodity under the conditions of a uniform price, and what he would have paid under the least favorable conditions of differential pricing. Thus in Figure 2A the curve P_0I_0 shows the path the marketer would follow under perfect differential pricing: at a price just a little less than r_0p_0 he will buy one unit; at a slightly smaller price he will buy another unit; and so on down the curve $P_0Q_1 \ldots\ldots I_0$. Under perfect differential pricing, therefore, he will pay S_1Q_1 for a quantity R_0R_1; under uniform pricing he would only pay S_1P_1. The buyer's surplus, therefore, is P_1Q_1. Similarly, if the be shown that this is also equal to the area $s'_1p_0p'_1$ in Figure 2B. marketer buys an amount R_0R_2 at a uniform price r_2p_2, the buyer's surplus is P_2Q_2. It can easily be shown that the buyer's surplus is also equal to the triangular area under the demand curve. Thus, at a quantity R_0R_1 $(=r_0r_1)$ the total amount which the marketer would have to pay under perfect differential pricing is the area $r_0p_0p_1r_1$ in Figure 2B. This is equal to the line S_1Q_1 in Figure 2A. The total amount paid under uniform pricing is the area $r_0s_1p_1r_1$ in Figure 2B $(=S_1P_1$ in Figure 2A). The buyer's surplus in Figure 2B, therefore, is $r_0p_0p_1r_1 - r_0s_1p_1r_1 =$ area $s_1p_0p_1$.

An exactly analogous concept of "seller's surplus" can be derived from the supply curve $p_0p'_2$ in Figure 2B, and the corresponding part of Figure 2A. Thus the marketer will sell an amount $P_0S'_1$ for an amount $S'_1P'_1$ under uniform pricing. Under perfect differential pricing he can be made to sell this amount for only $S'_1Q'_1$. The seller's surplus —the difference between these two amounts—is $P'_1Q'_1$. It can easily

The next problem is to remove the limitation of parallel indifference curves. Figures 3A and 3B show a situation in which, for each quantity of commodity, the *MRS* increases as the quantity of money increases: as we move upward along any vertical line in Figure 3A we cut indifference curves of successively steeper slopes. The system of indifference curves do not now reduce to a single *MRS* curve, but in-

amount of money. This last assumption could only be even approximately true over small ranges. On these assumptions, of course, the *MRS* would likewise be independent of the quantity of money for each quantity of commodity. The *MRS* may also be constant, however, if *both* the marginal utility of commodity and the marginal utility of money change in the same proportion as the quantity of money changes. Thus as we proceed upward along any vertical line in Figure 2A, the marginal utility of money is likely to fall, as the quantity of money increases, following the familiar law of diminishing marginal utility. It is possible that the marginal utility of the commodity will also fall as the quantity of money increases, even though the quantity of commodity is held constant. This will happen if the commodity is "competitive" with money.

stead each indifference curve has its own *MRS* curve: in place of the single *MRS* curve of Figure 2B we now have a system of such curves as in Figure 3B: m_0i_0, m_1i_1, etc., corresponding to the indifference curves M_0, M_1, etc., of Figure 3A. Then at a price equal to the slope of the opportunity line P_0P_1 in Figure 3A ($=r_1p_1$ in Figure 3B) the amount bought will be R_0R_1, P_1 being the point of tangency of P_0P_1 with the indifference curve. If in Figure 3B a perpendicular from r_1 cuts the *MRS* curve m_1i_1 in p_1, r_1p_1 is the price at which the amount or_1 will be bought—being equal to the slope of the indifference curve at P_1. Similarly r_2p_2, p_2 being on the *MRS* curve m_2i_2, is the slope of the indifference curve at P_2, and is the price at which r_0r_2 will be bought. The dotted line $p_0p_1p_2$ is, therefore, the demand curve, which is not now identical with any one of the *MRS* curves, but has a flatter slope. Similarly, $p_0p'_1$ is the supply curve, derived from the outlay curve $P_0P'_1$. The supply curve in this case has a steeper slope than the *MRS* curves. It is easy to show that if the slopes of the indifference curves at a given quantity of commodity *fall* with increasing quantity of money, the *MRS* m_1i_1 will lie below m_0i_0, m_2i_2 will lie below m_1i_1, and so on. In this case the demand curve will have a steeper slope than the *MRS* curves and the supply curve a flatter slope.

The buyer's surplus does not, in this more general case, equal the triangular area under the demand curve. Thus, in Figure 3A the buyer's surplus at the quantity R_0R_1 is P_1Q_1 (S_1Q_1—S_1P_1). Corresponding to S_1Q_1 in Figure 3A, we have the area $p_0q_1r_1r_0$ under the *MRS* curve m_0i_0: corresponding to S_1P_1, we have—as before—the rectangle $r_0s_1p_1r_1$. The buyer's surplus, then, is equal to $os_1p_1r_1$, which $r_0p_0q_1r_1$– is equal to the triangle $s_1p_0t_1$ minus the triangle $t_1p_1q_1$. This is clearly less than the "demand triangle" $s_1p_0p_1$, which in this case has no meaning whatever. Similarly in the case of supply: the seller's surplus, at a quantity $R_0R'_1$, is equal to the quadrilateral area $s'_1p'_1q'_1p_0$. This is *greater* than the "seller's triangle" $p_0p'_1s'_1$. If the *MRS* became smaller as the quantity of money increased, the relations would be reversed: the buyer's surplus would be larger than the buyer's triangle, the seller's surplus would be smaller than the seller's triangle.

There is another important concept which is associated with the idea of economic surplus. This is the concept of a "compensating payment": *i.e.*, of the sum of money which would be sufficient to compensate a marketer for a given change in the price of the commodity. Thus, in Figure 3, suppose that there is a rise in price from r_2p_2 to r_1p_1. The opportunity line shifts from P_0P_2 to P_0P_1: the buyer shifts from the position P_2 to the position P_1. P_1 is on a lower indifference curve than P_2—*i.e.*, the buyer is worse off because of the shift in price. The ques-

tion is, What sum of money, given to the buyer, would just compensate him for the rise in price—*i.e.*, would enable him to get back again to the indifference curve M_2? This is the sum P_0P_x, where P_xX_2 is drawn parallel to P_0P_1 to touch the indifference curve M_2 in X_2. If he had a sum R_0P_x to start with, and if the price were r_1p_1, the opportunity line would be P_xX_2, as the slope of this line is equal to that of P_0P_1: with this sum of money and at this price he will proceed to X_2, where he is just as well off as he was at P_2, X_2 and P_2 being on the same indifference curve. The amount he would buy under these circumstances is in between the amounts he would buy at P_1 and at P_2.

If the indifference curves are parallel it can easily be shown that the compensating payment is equal to the change in the buyer's surplus due to a shift in price: under these circumstances, as in Figure 2, X_2 coincides with W_2, as the slopes of the indifference curve at W_2 is equal to the slope at P_1. The change in buyer's surplus is $P_2Q_2 - P_1Q_1 = W_2P_1 = P_0P_x$. If the *MRS* increases with increases in money, as in Figure 3A, the compensating payment is larger than the change in the buyer's surplus.[3] It can be shown that, in terms of Figure 3B, the compensating payment for a change from p_2 to p_1 is the area $s_1s_2p_2s_x$: the change in the buyer's surplus is the area of the complex polygon $s_1s_2p_2q_2q_1p_1$. It should be observed that the compensating payment in the case of a fall in price from r_1p_1 to r_2p_2—*i.e.*, the tax which a buyer would have to pay in order to bring him to the indifference curve I_1 when the price is r_2p_2—is less (in Figure 3A) than the compensating payment in the case of a rise in price. If P_tX_t is drawn parallel to P_0P_2 to touch M_1W_1 in X_t, P_0P_t is the tax which will just balance the gain to the buyer resulting from a fall in price from r_1p_1 to r_2p_2. This is equal to the area $s_1s_2s_tp_1$ in Figure 3B. If the indifference curves are parallel, of course, the compensating payment is the same whether the movement of price is a rise or a fall.

Consider now what the payment must be to compensate the marketer for the entire loss of the market—*i.e.*, for the prohibition of buying or selling. In that case he will not be able to move from the position P_0. If the original price was r_2p_2, the payment which would be necessary to compensate for the loss of the market would be P_0N_2. This will bring the marketer up to the indifference curve to which he could have attained had he been free to buy at the price r_2p_2. P_0N_2 is equal to the

[3] For a fuller discussion of the "Compensating Payment" concepts see the following:

J. R. Hicks, *Value and Capital* (Oxford, 1939), pp. 38-41; and "The Rehabilitation of Consumer's Surplus," *Rev. Econ. Stud.*, Vol. 8 (Feb., 1941).

A. Henderson, "Consumer's Surplus and the Compensating Variation," *Rev. Econ. Stud.*, Vol. 8 (Feb., 1941), p. 117.

A. Kozlik, "Note on Consumer's Surplus," *Jour. Pol. Econ.*, Vol. XLIX, No. 5 (Oct., 1941), p. 754.

area $p_2s_2n_2$ in Figure 3B. It will be observed that this area is larger than the "demand triangle" $p_2s_2p_0$. In the case of a seller, if the price had originally been $r'_1p'_1$, the sum needed to compensate the seller for the loss of the market is P_0N_1, equal to the area $p_1s_1n_1$ in Figure 3B. This area is smaller than the "supply triangle," $p_0p'_1s'_1$.

We can apply this analysis to the consideration of the "gain from trade"—*i.e.*, the total payment which would be necessary to compensate all the marketers for the loss of a market. In Figure 4, a group of individual demand-supply curves is shown, cutting the price axis in S_3, S_2—B_2, B_3. The market demand curve is obtained from these demand-supply curves by summing the total quantity bought at each price—*i.e.*, by adding horizontally that part of the curves to the right of the price axis: it is the curve $B_3H_2H_3N$. Similarly, the market supply curve, $S_3K_2K_1M$, is obtained by adding horizontally those parts of the demand-supply curves which lie to the left of the price axis. The market price is OP, where $PN = PM$—*i.e.*, the total quantity demanded—is equal to the total quantity offered. If now the indifference curves of the marketers are parallel, so that the "demand triangle" measures the compensating payment for each buyer, the total compensating payment to buyers is the area $PN_1B_1 + PN_2B_2 + PN_3B_3$, which is equal to the area PNB_3. Similarly, the total payment which would compensate sellers for the loss of the market is the area PS_3M. If now we draw S_3N the mirror image of S_3M, we get the familiar

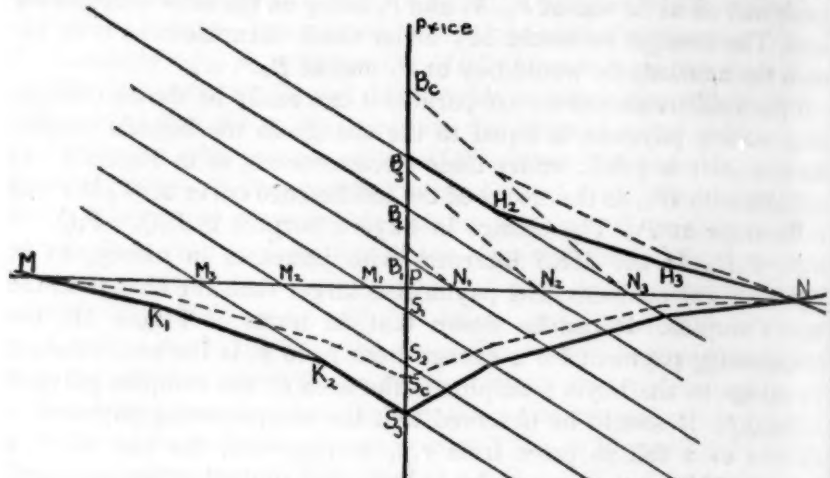


FIGURE 4

supply and demand figure, and the total compensating payment is the area S_sNB_s.

It is not difficult to introduce an adjustment to take care of the case where the marketers' indifference curves are not parallel. The curve B_cN is obtained by summing horizontally the *MRS* curves of each buyer passing through N_1, N_2, N_3, (shown as dotted lines in Figure 4). B_cN is an aggregate *MRS* curve for the buyers: the total compensating payment is, therefore, the area PB_cN. Similarly, MS_c is the aggregate *MRS* curve for the sellers: the total compensating payment to sellers is PS_cM. If NS_c is the mirror image of MS_c, the total payment which would compensate both buyers and sellers for the loss of the market is the area B_cNS_c. Unless conditions are very peculiar, the area B_cNS_c is not likely to differ very greatly from the area B_sNS_s, as the corrections lie in the same direction. While the assumption that the *MRS* increases with increase in the quantity of money makes the buyers' compensating payment larger, it makes the sellers' compensating payment smaller, so that the total is not much changed. If we assumed that the *MRS* declined with increase in the quantity of money, the effect would be to diminish the buyers', but to increase the sellers' payment.

We can apply the above analysis to the well-known theorem in the field of taxation, to prove that, if a tax is laid on a commodity, the total tax revenue is less than the "loss" to the marketers, as measured by the compensating payment. That is to say, even if all the revenue from a commodity tax were to be returned as a lump sum to the taxed marketers, the marketers would be worse off than before. This is shown in Figure 5, where *BP, SP* are the market demand and supply curves. If a tax equal to N_sN_b is placed on each unit of the commodity, when the market is in equilibrium buyers will pay ON_b, sellers will receive ON_s. The total tax revenue is $N_sN_b \times N_sP_s =$ the area $N_sN_bP_bP_s$. If indifference curves are parallel, the sum that would have to be paid to buyers to compensate them for the rise in price is NN_bP_bP: the corresponding sum for sellers is NPP_sN_s. The total payment required to compensate for the tax is $N_sN_bP_bPP_s$: this is greater than the total tax revenues by an amount equal to the area P_sP_bP. If now we introduce a correction for increasing *MRS*, PH_b and PH_s are the aggregate *MRS* curves for buyers and for sellers, and the total payment required to compensate for the tax is $N_sN_bH_bPH_s$. This is greater than the total tax revenues by an amount equal to the complex area of the polygon $P_sP_bH_bPH_s$. This area will not differ greatly from the area P_sP_bP.

Up to this point we have considered the concept of economic surplus only in relation to the pure market phenomenon in which there is no

production or consumption, only transfers of money and commodity among the marketers. The application of the concept to long-run problems is beset with many difficulties, largely because it is impossible to treat such cases realistically without reference to uncertainty. A distinction can be made between those surpluses (or deficits) which are the results of uncertainty—*i.e.*, the result of the "disappointment"

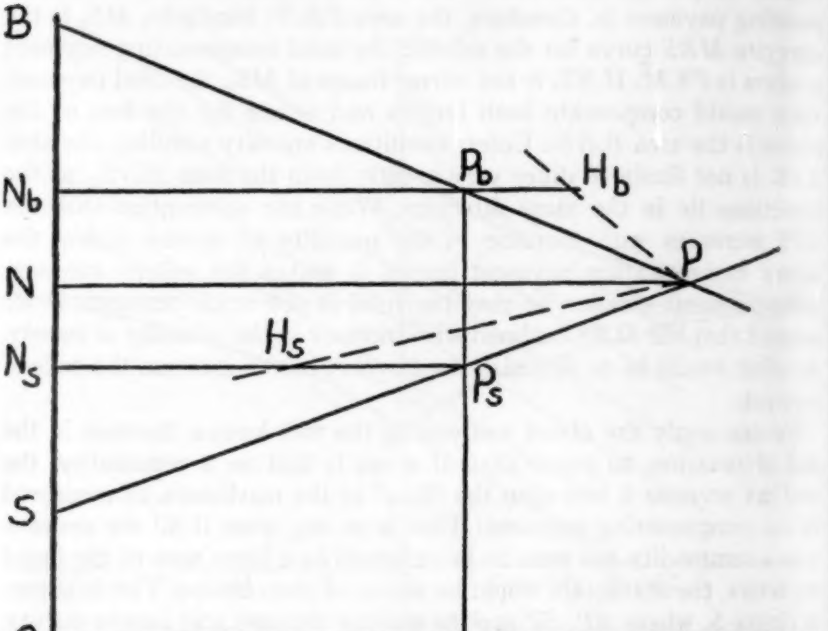


FIGURE 5

of expectations in a favorable or unfavorable direction—and those which are in some sense part of the permanent structure of economic life. This seems to be the basis for the Marshallian distinction between "true"—*i.e.*, permanent—rents and "quasi-rents." Marshall observed that a supply curve which was highly elastic in the long run might be quite inelastic in the short run. Hence for limited periods the rewards of a factor such as durable equipment might be much diminished, or even completely taken away, without affecting the output of its services. Such a reward has something of the nature of a surplus, or "rent." Because, however, the services of the factor would not be forthcoming indefinitely at low or zero rewards, Marshall called its return a "quasi-rent."

Quasi-rents, however, can exist only because the future is uncertain:

if, for instance, the potential owners of a durable good knew at the outset that the returns were going to be lower than the long-run supply price, the good would not be produced. Disappointment, therefore, is of the essence of a quasi-rent. What we know too little about, however, is the relation of a succession of disappointments to the long-run supply price itself. Long-run supply and demand curves are a useful cloak to cover up a vast complexity of inter-temporal relationships and, while they may enable us to perceive the broad shape of these complexities more clearly, they frequently hide the real dynamic structure of the system. Thus the application of the economic surplus concept to long-run demand and supply curves is beset with difficulties, and may not be very fruitful. The concept cannot be used, certainly, to justify the thesis of Marshall and Pigou regarding taxing industries of increasing supply price to subsidize industries of decreasing supply price—quite apart from the question of whether these categories are "empty boxes."

Nevertheless, as applied to a particular "industry" or sector of economic life, the concept has some meaning: in fact, several possible meanings. We may ask ourselves, "What is the greatest amount that could be extracted from this industry by price discrimination, without change in output?" Thus by price discrimination consumers could be forced to pay more for the present output, and producers could be forced to receive less. The economic surplus, in this sense, represents that theoretical maximum which the state might get out of an industry by discriminatory taxation, without affecting output. Another possible meaning of economic surplus in this case is the sum of money which would be just sufficient to compensate the individuals of society for the loss of the industry. These correspond to the two concepts already described. There is small likelihood, however, that these concepts will coincide, or that either of them can be measured by the area between the demand and supply curves.

The problem of applying the economic surplus concept to the economy as a whole is of the utmost importance, yet tantalizingly difficult. The "compensatory payment" concept here is quite meaningless: obviously no sum of money, or purchasing power, could compensate for the loss of the whole volume of production. The alternative concept, however, of the amount that might be extracted from the society without a diminution of output is of very great importance, for it represents that part of the total product which is "available"—either for redistribution, or for the extravagance of the state or for the pursuit of military power. For Marx, of course, the whole produce of society above the subsistence of the working class was "economic surplus" (*i.e.*, surplus-value); for by the labor theory of value the

subsistence of the working class is all that is necessary to call forth the total product. Marx undoubtedly went too far in this, for the process of production is not merely a mechanical transformation of acts of labor into product, but is a subtle complex affected by innumerable institutional and psychological factors. How much can be expropriated from society without destroying productive activity depends a great deal on the manner of the expropriation. Thus the economic surplus of the whole economy is not a very clear concept. There are indications that in modern industrial society it may be very large, and the experience of the war shows what a great proportion of current output can be diverted to "unproductive" uses without any serious impairment of productivity.

The indifference curve analysis used earlier can throw some light on this problem. In Figure 6 we show, for an individual, indifference curves between money and a factor of production. We will suppose, to fix our ideas, that the factor is labor: then OR_0 is the amount of labor at the person's disposal—say, 24 hours per day; R_0P_0 is the amount of money in his possession at the beginning of the day; P_0P_1 is the opportunity line at zero wages (as we have drawn the indifference curve with a positive slope at P_0, indicating that in small quantities labor is positively pleasurable, the individual will give up an amount P_0P_1 of labor even at zero wage). P_0P_2, P_0P_3, etc., are the opportunity lines at successively higher hourly wage rates: the locus of their points of tangency with the indifference curves, $P_0P_1P_2 \ldots$ is the total receipts curve, measured from the line P_0P_1. From this curve, the supply curve for labor can be derived just as the supply curve was derived in Figure 2. It will be observed that the curve is re-entrant: *i.e.,* above a certain wage, represented by the slope of P_0P_3, an increase in the wage results in a decline in the amount of labor offered. This is the familiar "backward sloping" supply of labor.

Suppose now that a flat-rate income tax is laid on the individual when his wage was equal to the slope of P_0P_4. The result of the tax is simply a reduction in the effective hourly wage: the opportunity line less tax falls to, say, P_0P_3. Because the supply is negatively elastic in this region, there is actually a rise in the amount of work done because of the tax, from R_0R_4 to R_0R_3. The gross income earned is then $S_3P'_4$: the total tax collected is $P_3P'_4$. If the tax were laid in a region where the supply was positively elastic, as between P_3 and P_2, it would cause a fall in the amount of work supplied.

Some interesting conclusions can now be drawn as to the theory of progressive or regressive taxation. A progressive tax is one where the proportion of income paid in taxes rises with rise in income. The opportunity line after tax therefore bends downwards—*i.e.,* its slope

becomes less and less with increasing work done. Where the tax rate increases by "brackets" of income, the line will be a series of straight lines of diminishing slope. Thus P_0T represents the opportunity line

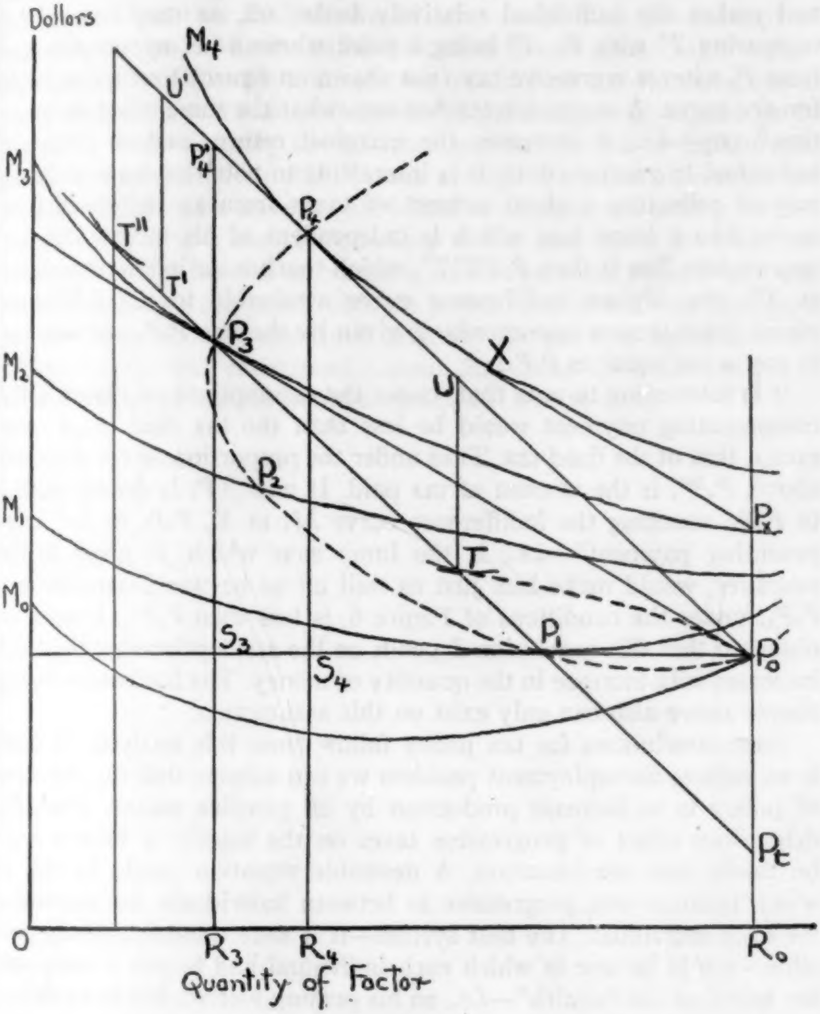


FIGURE 6

after a progressive tax is deducted from the income of P_0P_4. It touches an indifference curve at T, and has been drawn so that the total tax paid, TU, is equal to the tax paid under a flat rate tax, $P_3P'_4$. It will be seen that the effect of raising a given revenue from an individual by a progressive rather than a flat-rate tax is to lower the amount of

work done, to lower net income after tax, and to make the individual relatively worse off, as may be seen by comparing the position at T with the position at P_3. Raising the same revenue by a regressive tax, on the other hand, results in an expansion of output and of income, and makes the individual relatively better off, as may be seen by comparing T' with P_3, T' being a point where a net opportunity line from P_0 after a regressive tax (not shown on figure) touches an indifference curve. A regressive tax has somewhat the same effect as "overtime" pay—*i.e.*, it increases the marginal return, and so spurs the individual to greater effort. It is interesting to note that an even better way of collecting a given amount of taxes from an individual is to assess him a lump sum which is independent of his income. His net opportunity line is then $P_tTT'T''$, which touches an indifference curve at T''—the highest indifference curve attainable to the individual, whose gross income opportunity is given by the line P_0P_4 and who has to pay a tax equal to P_0P_t.

It is interesting to note that, under the assumptions of Figure 6, the compensating payment would be less than the tax paid in all cases except that of the fixed tax. Thus under the proportionate tax discussed above, $P_3P'_4$ is the amount of tax paid. If now XP_x is drawn parallel to P_0P_3, touching the indifference curve M_4 at X, P_0P_x is the "compensating payment"—*i.e.*, is the lump sum which, if given to the taxpayer, would make him just as well off as he was before the tax. P_0P_x, under the conditions of Figure 6, is less than $P_3P'_4$. It must be observed that this conclusion depends on the assumption that the *MRS* increases with increase in the quantity of money. The backward-sloping supply curve also can only exist on this assumption.

Some conclusions for tax policy follow from this analysis. If there is no serious unemployment problem we can assume that the objective of policy is to increase production by all possible means. Then the deleterious effect of progressive taxes on the supply of factors must be taken into consideration. A desirable situation would be one in which taxation was progressive as between individuals, but regressive for each individual. The best system—if it were administratively possible—would be one in which each individual had to pay a lump sum tax based on his "wealth"—*i.e.*, on his earning *power*—but independent of his income—*i.e.*, independent of the degree to which he put his earning power to use. To some extent the property tax is of this nature; and, although one hesitates for political reasons to advocate extending the principle of the property tax to the property that we have in our minds and bodies, real economic benefits might follow.

In the presence of an intractable unemployment problem, however, it is by no means certain that a "property tax" would be even theo-

retically the most desirable. In such a condition we might wish to repress the labor supply rather than encourage it, and there might then be a case for diminishing the labor force through progressive taxation, even though this might seem a counsel of despair.

The moral of this analysis would seem to be that the concept of economic surplus, while it can be defined to have a good deal of meaning, is not a sufficiently accurate analytical tool for the solution of problems of policy. As an instrument for the analysis of welfare problems it is much inferior to the more general device of indifference curves. It is a concept capable of much ambiguity and, in hands that are not highly skilled, its use can easily lead to false or misleading results. Nevertheless, it is a useful expository device and has a long and interesting history. Even if it occupies a relatively subordinate place in modern economics compared with the central position it once occupied, it is by no means to be discarded. And the student who appreciates its full significance will understand a great deal about the problems which both the classical and the modern economics seek to solve.

ANNUAL WAGE GUARANTEE PLANS

By Rita Ricardo*

The drive for economic security on the part of wage earners has forced the public to consider the possibilities of annual wage guarantees. In the midsummer of 1945 the National War Labor Board, for the first time, ordered a guaranteed work plan to be included in a labor management contract.[1] Government research groups, outgrowths of a presidential committee, have been appointed to study annual wage guarantee plans while current, popular literature describes them as an effective means of reducing seasonal and cyclical unemployment. Labor proponents of annual guarantees believe that they "tend to be self-serving through their contribution to maintenance of purchasing power, make our economy more stable, and give rise to the creation of new job opportunities."[2] Their claims have been upheld by the Department of Labor-sponsored National Conference on Labor Legislation which, in endorsing the principle of an annual wage, stated that "experience of progressive managements over a period of years has shown the value of a guaranteed annual wage in maintaining stability of employment and purchasing power for the products of industry."[3]

The purpose of this paper is to help evaluate these claims by determining the effects of the adoption of an annual wage guarantee plan by a single firm, by an industry, by all industry.

An annual wage guarantee plan is a guarantee by an employer to his employees, all or a per cent of his labor force, of a weekly paycheck of a constant amount for a given number of weeks of the year, usually forty or more. It may or may not include a wage advance, an amount above what the employee actually earns in a short hour week which the employee repays by working longer hours in other weeks, thus keeping the paycheck at a constant level. The plan is not to be confused with a guaranteed employment plan where the guarantee is on regular work, not regular take-home.

The first annual wage guarantee plan in the United States was

* The author is extremely indebted to Professor Wassily Leontief of Harvard University for his valuable suggestions and criticisms.

[1] *Boston Globe*, July 28, 1945, p. 1.

[2] U.S. National War Labor Board, *Supplemental Opinion of Labor Members of the Panel*, Case 111-6230-D (14-1 et al.), p. L-35.

[3] Eleventh National Conference on Labor Legislation. *Text of Resolution;* adopted December 14, 1944, Washington, D.C.

introduced in the Columbia Conserve Company, Indianapolis, Indiana, in 1917. There is no accurate count of the growth of these plans in operation, but their number has probably never been large. During the depression of the thirties, and also at the passage of the federal unemployment compensation law, many were sharply curtailed or completely wiped out. The National Industrial Conference Board has estimated, from a sample survey made in 1936, that less than one per cent of the companies in the United States had any form of annual wage or employment guarantee plan and that in 1940 only thirty plans of this type were in operation.[4] As of March, 1944, fifty-seven companies had annual wage plans on file with the Wage and Hour Division of the Department of Labor. Since by filing, the employer benefits by partial exemption from penalty overtime payments, this count may be considered fairly accurate.[5] Only four out of the thirty-one companies for which we have the necessary data provide an annual guarantee for their whole labor force. A recent Bureau of Labor Statistics survey states that, out of a group of eight million workers covered by labor contracts, less than fifty thousand or six-tenths of one per cent are covered by a guaranteed wage or employment provision.[6]

Adoption of an annual wage guarantee by a single firm. In an attempt to make the analysis applicable to the present economy, conditions are assumed as near to reality as is possible without confusing the issue. The firm has a union shop contract.[7] The annual wage plan is negotiated and the details bargained on at the beginning of the year. The most important point to be bargained on is obviously the amount in dollars of the guaranteed wage bill. At the actual negotiation table this will be broken down into the number or per cent of employees who will receive an annual wage guarantee, the number of weeks to be guaranteed and the basic wage rate to be used in computing the final figure. Although the above are mutually determined, the employer still has the sole right to decide the size of his labor force. He must, however, fill vacancies immediately and may not fire any employee covered by the guarantee except at the time of renegotiation. This provision limits substitution of machinery for labor during the year to that for newly hired labor or labor that would be hired. The situation where the number of workers hired is mutually determined by the

[4] National Industrial Conference Board, *Management Record*, May, 1944, p. 118; and *What Employers Are Doing for Employees* (Stud. No. 211, 1936), p. 11.

[5] U.S. N.W.L.B., *Guaranteed Employment and Annual Wage Plans* (Research and Stat. Rept. No. 25), August 25, 1944, p. 6.

[6] U.S. B.L.S. *Monthly Labor Review*, April, 1945, p. 708.

[7] Every member of the labor force must be a member of the union but the entrepreneur may hire whom he pleases under the condition that the newly hired person, after serving a probationary period, will become a member of the union.

entrepreneur and the trade union is discussed later as a natural development of collective bargaining under annual wage guarantee plans.

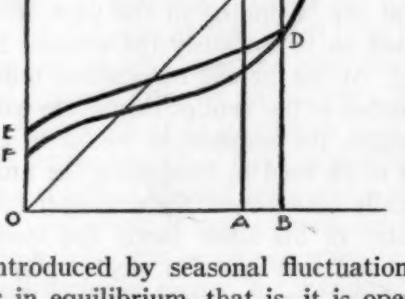
It is necessary to distinguish between firms with different market conditions since the effects of such a plan being adopted by a single firm depend on what type of firm introduces the plan. Firms may be divided into two groups, those whose factor and product markets are not seasonal and those whose factor and product market, either or both, are seasonal. Firms may be further classified as follows:

1. A firm whose product market is competitive.
2. A firm whose product market is typified by monopolistic competition and whose product, because of deterioration or obsolescence, cannot be stored from one year to the next.
3. A firm whose product market is typified by monopolistic competition and whose product can be stored from one year to the next.

Firm in a non-seasonal industry. For a simpler first analysis it is assumed that the firm is in a non-seasonal industry. Complications

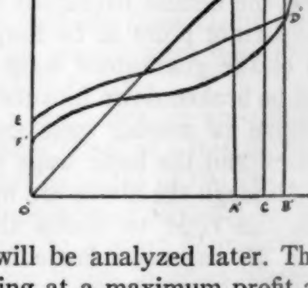
I

FIRM WITH A COMPETITIVE PRODUCT MARKET



II

FIRM WITH A MARKET TYPIFIED BY MONOPOLISTIC COMPETITION



introduced by seasonal fluctuations will be analyzed later. The firm is in equilibrium, that is, it is operating at a maximum profit and its marginal cost equals its marginal revenue. In the short run, that period being defined as the first year during which the plan is in operation, the level of the total cost curve of the firm will be raised and its slope flattened out up to the output which the firm under its original cost curves would have produced if it had used up all the guaranteed labor cost. At this point the new total cost curve will join the old one. The entrepreneur's fixed costs have been increased by the amount of the imposed labor cost, while his variable and thus marginal costs have been decreased. If the new total cost curve does not join the old one until after the equilibrium output, the imposition of the plan will change

the firm's optimum output since it has decreased the marginal costs at and beyond the original optimum output and left the shape and level of the marginal revenue curve the same.

In Diagram I, the original total cost curve is *FDG;* the new one, *EDG*. The total revenue curve remains the same. *OA* is the optimum output of the firm before the imposition of the annual wage guarantee plan; *OB*, after it is imposed. *OB* is also the output which the firm can produce if it uses up all its guaranteed labor cost.

Diagram II is identical with Diagram I except for the difference in the shape of the total revenue curve and the fact that *O′C*, not *O′B′*, is the optimum output after the plan is imposed.

To understand the implications of the above analysis three cases are set up:

1. The amount of the payroll guaranteed is less than the total labor cost needed to produce the maximum profit output.
2. The amount of the payroll guaranteed is equal to the total labor cost needed to produce the maximum profit output.
3. The amount of the payroll guaranteed is more than the total labor cost needed to produce the maximum profit output.

It is obvious that in the first two cases the optimum output position of the firm will not change. It is only the third case, represented in the above diagrams, which is of interest. Under the assumption that the employer retains the right of unilateral decision over the number of employees which he hires, it is rather unlikely that he will find himself in this position unless he is a poor planner. As long as he can set the number of his employees, he will never hire a number greater than that which he knows he can fully employ for a year. Therefore the guaranteed payroll will not, even with a guarantee of 100 per cent of the working force, be larger than that which he would have paid without the guarantee. The fact that a fixed group of men are assured that they will be the ones to share the payroll is only a slight change in degree of the usual restrictions on the employer's right to fire as expressed in labor contracts. A payroll larger than that which would have been paid without the guarantee would be common if the trade union and the employer negotiated the number of employees to be hired.

Proponents of annual wage guarantee plans have not asked that the size of the work force be a matter of negotiation, although in a few cases where plans are already in existence it is, but their arguments imply this request. Trade unions will not be long in realizing that only if they have some control over the number of employees can an annual wage guarantee in a non-seasonal industry yield to labor, year after

year, anything above what they would have had without the guarantee. If they do not have this control in some form, employers can reduce their work force at the beginning of each contract year to a minimum and hire temporary workers as they need them. In fact this practice, coupled with a seniority qualification for a guarantee, would void the value of any guarantee.

The third case is important not as an analysis of the position of the entrepreneur who has made a poor estimate of his labor needs, but of the entrepreneur who is forced at the negotiation table to hire more workers than is consistent with his greatest profit. This situation is, wherever the trade union is stronger than the employer, a logical development of collective bargaining under annual wage guarantee plans. Here the employer is likely to be forced to accept what he does not want, as is the union, when the positions are reversed. There are many possible combinations of different degrees of power on either side, but because of the very nature of collective bargaining, no precise formulation of the outcome of clashes between different degrees of power is possible. A recent, attempted tabulation gives an illusion of predeterminate exactness to the results of collective bargaining which, because of the uncertainty introduced by bluff, cannot exist.[8]

In Diagram I, the case of a firm with a competitive product market, total costs are higher at *OA* output, and over the output range to *OB*, than before the plan was adopted. The entrepreneur must determine the optimum volume of production under the new conditions, and the optimum amount of that volume to sell in the first year of the plan. The entrepreneur with a competitive product market, who expects no change in the price or demand for his product from Year One to Year Two, will sell in Year One all that he produces in that year. The increase in his profits gained from selling the additional production in Year One is greater than would be the discounted future profit from selling it one year hence. Even if a price rise were expected it is unlikely that it would be large enough to cause an entrepreneur in a competitive market to hold part of his stock for future sale. An expected price rise is usually not thought of as a large jump in price but as the culmination of a rising trend of prices. The fact that the entrepreneur has no control whatsoever over this price also would deter him from holding any of his product as a speculative investment.

He may produce *OA*, or he may produce *OB*. Following traditional analysis, the determination of his optimum output depends on the

[8] See J. T. Dunlop, *Wage Determination under Trade Unions* (New York, Macmillan, 1944), p. 91, and *Review of Economic Statistics*, Vol. 27, No. 1 (Feb., 1945), p. 35, footnote 4.

elasticity of the revenue curve and the slope of the new total cost curve, since these determine profits. Because by hypothesis the demand curve is perfectly elastic, the change in the volume of the most profitable output will depend mainly on the level and slope of the new total cost curve. The difference between the slopes of the new and old total cost curves, or between the marginal cost curves, will depend largely on the relative amount of labor cost per unit of output. If the old total cost curve represented four outlay units of labor and two outlay units of raw materials, it would be rising at the rate of six units (assuming only two variables), the new one at the rate of two. The larger the labor cost per unit of output, the flatter the total cost curve becomes and the more probable that a larger output than the original one is the most profitable one. Other factors influencing the volume of the most profitable output is the effect of the increased demand of the entrepreneur on the prices of the other factors which he must buy and the possibility of greater utilization of existing plant and machinery. The smaller the entrepreneur's influence on factor prices and the less additional plant and equipment needed, the larger the new maximum profit output will be. In the determination of the new optimum output the size of the imposed cost in relation to the "normal" labor cost is paramount. The problem is to maximize the new profit, or the difference between the total revenue and the new total cost. The total revenue will increase because more units are sold; total cost will increase partly because more units are produced and partly because of the imposed fixed labor cost. The output at which this difference is largest is the entrepreneur's new optimum output.

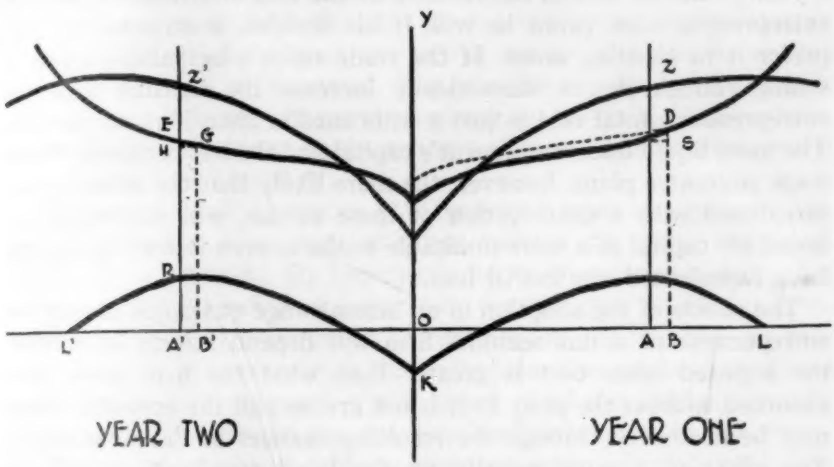
If the firm has a competitive product market the new equilibrium output will be *OB*. Since the new total cost curve in many cases will have a kink at *D*, proof that *OB* output is the entrepreneur's most profitable one cannot rest on the fact that at this output the marginal cost equals the marginal revenue or price. There are two marginal cost curves involved: the one derived from the new total cost curve *ED* and the one derived from the old total cost curve *FDG*, which the new one joins. At *D*, where the direction of the combined total cost curve *EDG* changes, there is no unique marginal cost. Since by assumption the new total cost curve joins the old one beyond the point where the marginal cost equals the price, marginal cost will increase faster than marginal revenue at outputs greater than *OB* and will increase at a slower rate at outputs smaller than *OB*. The entrepreneur will tend to stay at *D*, or continue to produce *OB* regardless of changes in the price of his product. This rigidity of supply by the individual firm is maintained because *OB* remains the most profitable output even when there is a large change in the price of the product.

The entrepreneur with a product market typified by monopolistic competition but whose product, because of quick deterioration, obsolescence or some other factor, cannot be stocked from one year to the next will also sell in Year One all that he produces in that year. Unlike the entrepreneur with a competitive market he may not find *OB* or *O'B'* to be his optimum output. If the demand for his product over the *A'B'* output range were inelastic, the entrepreneur would have to reduce the price of his product drastically to sell more units of it and, therefore, his total revenue will not increase as rapidly as if the demand were perfectly elastic; in fact, it may decrease. His optimum output may be anywhere between *O'A'* and *O'B'* or either of these two limits. As before, it will be the output which maximizes the difference between the old total revenue curve and the new total cost curve.

The entrepreneur with a market typified by monopolistic competition and whose product can be stored one year and sold the next may not wish to sell all of his additional output in Year One. He will consider his costs and revenue for Year One and Year Two together. Since there are no prohibitions against the entrepreneur's firing as many of his employees as he wishes at the end of Year One, he can balance his enforced overproduction in Year One by piling up inventory and, unlike the other two entrepreneurs already considered, produce less than he would otherwise have done in Year Two. He retains the opportunity to produce his optimum output, only he considers his production period to be two years, not one. As seen in Diagram II, he may produce *A'C* in addition to his original output in Year One. He will sell, however, only that part of it in Year One which will increase his total profit in that year by an amount which just equals the profit he would get by selling it in Year Two. In Year Two he will produce less than he would have had produced if the additional cost had not been imposed in Year One. He will employ less labor in Year Two, the amount depending on the slopes of his total revenue and cost curves. In Year One, by assumption, the marginal revenue product of labor is less than its marginal cost. If the entrepreneur employs less labor in Year Two than he otherwise would have, labor's marginal revenue product in that year would be greater than its marginal cost. Over the two years he can balance these amounts and attain the production volume which will be the most profitable possible for the two-year period.

In the diagram below dollars are on the Y axis; the number of workers on the X axis. It is assumed that conditions are identical over a two-year period. Employment of *OA* labor yields the maximum profit in Year One, but the entrepreneur is forced to employ *OB* labor. AB equals A'B'. Will the entrepreneur's demand for labor in Year Two be

different from what it would have been if no guarantee had been imposed in Year One? (Storage costs and discounting for time are omitted for clarity of argument.) The marginal revenue of Year One, which depends on the amount of sales, *i.e.*, on the production of Year One minus the quantity of that production which is stocked, must be equal to the marginal revenue of Year Two, which depends on the production of Year Two plus the quantity stocked in Year One to sell in Year Two. In other words, the slope of the total revenue curve at Z must equal the slope at Z′, and thus the same amounts must be sold each year if maximum profit over the two-year period is to be realized. The marginal revenue of Year Two must equal the marginal cost of Year Two,



which depends on the production of that year, or the slope at G must equal the slope at Z′. The case in Year One is more complicated because the slope of the total cost curve at D is changing discontinuously. The forward slope at D must be greater than the slope at Z and the backward slope at D less than the slope at Z. Since there are three equations and three unknowns—production in Year One, production in Year Two, and the amount of goods which are produced in Year One and stocked to sell in Year Two—the problem is determinate, and the entrepreneur's demand for labor in Year Two, which depends on the production of that year, in most cases will be less than if an amount of labor greater than that consistent with optimum output had not been imposed in Year One.

The limit on the size of the imposed labor cost is smaller if the number of people hired is determined solely by the entrepreneur than if mutually by the trade union and the employer. Let us assume a negotiated annual wage rate of $2,000. The employer will estimate for different outputs his total costs at this rate and in conjunction with

his total revenue curve will chose the output which gives him the greatest profit. As he knows his production function and the price of labor, he can determine the number of people, say twenty-five, which he can most profitably hire. Can the trade union force him to accept twenty-six or more workers at that wage? If the trade union's bargaining power is greater than the entrepreneur's, it can, as any other monopoly, absorb the profits as an economic rent. It could do this either by forcing the entrepreneur to hire more workers than he would wish to at the negotiated wage rate or by a policy of wage discrimination. The trade union can force the entrepreneur to hire more than he wishes by presenting him with only two alternatives: twenty-six workers at $2,000 a year or no workers at all. As long as the first alternative allows the entrepreneur some profit he will, if his decision is an economic one, prefer it to shutting down. If the trade union's bargaining power is strong enough it can theoretically increase its demands until the entrepreneur's total cost is just a little smaller than his total revenue. The more liquid the entrepreneur's capital and the less prevalent annual wage guarantee plans, however, the more likely that the entrepreneur, threatened with a continuation of these tactics, will shut down and invest his capital in a more profitable business even though he may not have experienced any actual loss.

The effects of the adoption of an annual wage guarantee plan by the entrepreneur of a non-seasonal firm will depend largely on whether the imposed labor cost is greater than what the firm would have absorbed without the plan. If it is not greater, all the economic effects may be channeled through the resulting changes in the labor supply. The effect of greater security on the labor supply is virtually an unexplored field and the author, as yet, has not studied it sufficiently to come to any conclusions. Interviews with union men, primarily with those in seasonal industries, however, imply that security is sufficiently prized for many to acept a 5 to 10 per cent wage cut to get it. That it is so prized by those in non-seasonal industries is not so likely and that union leaders would exchange any general wage cut for guarantees, especially in the reconversion period when elimination of overtime alone will drastically cut weekly paychecks, also seems unlikely. A secondary effect on the labor supply may be traced through the probable reduction in the number of working wives of men granted the security of annual wages.

The effect of security on the quality of the labor supply is briefly discussed by Sir William Beveridge in his ***Full Employment in a Free Society.***[9] He believes that under his plan of full employment, which

[9] W. H. Beveridge, *Full Employment in a Free Society* (New York, Norton, 1945), pp. 194-98.

affords greater security than the annual wage guarantee, the possible loss of efficiency is outweighed by the gain from eliminating opposition to technological change. This outweighing advantage does not, however, exist under annual guarantees. Rather, opposition to technological change culminates to the end of the contract period and is all the stronger since that is the only time when introduction of machinery can force guaranteed employees out of work. Once the negotiation is over, opposition to new machinery which can be absorbed by normal turnover and expansion will be small.

The effect of annual wage guarantees on industrial discipline would not be as great as that of a more continuous guarantee of income, such as Beveridge describes. In contrast to the fear of idling on the job, other employers have felt that once a worker has some measure of security he will be a more productive worker and that in general labor relations will be improved. The question of whether the supply curve of labor in terms of quantity and quality moves right as a whole, or over a particular range, as the security of the worker increases needs to be further investigated.

If the annual wage guarantee plan imposes a labor cost greater than that which would have been absorbed without the plan, additional effects may be expected. By hypothesis the trade union would gain for the year of the guarantee a larger total payroll paid to its members. Whether the latter condition can be continued in the long run depends on whether the entrepreneur or the trade union has greater bargaining power. There is no measure of this power or of the ability to use it. Acting as positive limits are the possible bankruptcy of the entrepreneur, on the one hand, and the trade unionists collective refusal to work, on the other. If the number of workers hired is mutually determined by the entrepreneur and the trade union, a condition under which this case is most likely to occur, the range of bargaining is extended beyond that which would be established under unilateral hiring, but the determinants of the relative strengths of the two parties and the positive limits on them are the same. The widening of the area of bargaining makes it possible for a trade union whose bargaining power is far greater than the employer's to approach more closely the latter's limit without forcing him into bankruptcy. It also allows an entrepreneur with extreme power to approach more closely the trade union's limits without forcing a strike.

The relative bargaining powers of the trade union and the employer under both types of collective bargaining will be affected primarily by whether the product can be stored from one year to the next, and secondarily by the firm's profits, the firm's cost position within the industry, and the substitution of less expensive factors.

If the entrepreneur cannot store his product, the relative bargaining powers—for the moment we exclude the effect of the secondary factors—will not, regardless of the size of the imposed labor cost, change from one year to the next. The trade union's opportunity to impose, year after year, a labor cost greater than that consistent with the firm's optimum output will remain the same. If, however, the product is storable, the entrepreneur will probably reduce his production and his demand for labor in Year Two. The trade union's bargaining power will be decreased and its opportunity to impose an annual wage guarantee greater than that consistent with the firm's optimum output in Year One is reduced.

Among the determinants of the relative bargaining powers are the modifying secondary factors already mentioned. Profits over past years, and at the end of the year, indicate the limits to which the trade union may push its demands and also indicate the possible lockout strength of the entrepreneur. The cost position of the firm in the industry is closely related to the question of profits. Low cost firms have large profits; high cost firms, low ones. The long-run picture of possible competition of "non-annual wage guarantee firms" with their more flexible and in some cases lower labor costs presents the same complications as does the more familiar non-union firm and union firm competition. If the substitution of a less expensive input factor for labor is possible, the demand for labor and thus its bargaining power are decreased. As long as the imposed wage bill is such that the wages paid to any worker are greater than his marginal revenue productivity, the entrepreneur will wish to substitute either machinery for that labor, or by dilution of skills, cheaper labor.[10] This condition exists whenever the amount of payroll guaranteed is greater than the total labor cost needed to produce the optimum output, since even if the wage rate is kept at its old level, the marginal revenue product of the imposed additional workers will be below this wage. Substitution of machinery for labor is especially important when a change in conditions causes a larger output than formerly to be the optimum one, because the entrepreneur will, under the guise of expansion, increase the amount of machinery relative to the amount of labor.

In the long run if the trade union's bargaining power is consistently greater than that of the employer's, it can continue to get a larger than optimum output return for labor up to the point of forcing the entrepreneur out of business. If the payroll is consistently larger than the marginal revenue productivity of the workers, economic rent, either due to restricted entry to the industry or an unique advantage of the

[10] The condition of union shop imposed at the beginning of this discussion limits substitution of cheaper labor primarily to cases where dilution of skills is possible.

firm, must exist. The entrepreneur's losses or gains under different conditions have in large measure been implied since they are complementary to the trade union's losses or gains. To the less measurable advantages for the firm, increased productivity and improved labor relations, may be added the claim of reduced labor turnover. Although there are no satisfactory statistics proving that labor turnover is smaller in plants with annual wage guarantee plans, it is very probable. Because of greater retention of more skilled and efficient workers there is some reduction in costs which, however, may be offset by an increase in costs incurred through greater difficulty in getting rid of inefficient workers.

The firm in a seasonal industry has been isolated in the discussion because it is easier to handle after a more general analysis has been set up. In discussions of annual wage guarantee plans it is this type of firm which people think of as being both most in need of such a plan and yet presenting the most difficulties in the way of its adoption. Three types of seasonal industries may be distinguished: (1) industries where the supply of raw materials is subject to large seasonal variation while the consumer demand for the finished product is constant; (2) industries where the supply of raw materials is constant but the demand for the finished product is variable, and (3) industries where both the supply of raw materials and the demand for the product are variable. Annual wage plans have been successful in the first type of seasonal industry—Hormel in meat packing, Procter and Gamble in soap—but rarely in the other two, and it is in the latter type of industry, consumer durables and producers' goods, where unions today are asking for annual wage guarantee plans.

The firm in a seasonal industry, even though its annual output is its maximum profit one, has excess capacity at all times except at the peak period of production. If the entrepreneur can wipe out this excess capacity by continuous production at a constant level, his fixed costs and thus his total costs would be lower as he would require less plant for a given output. That employers are aware of this is indicated by the following: "The Ritter Dental Manufacturing Company made a study which indicated the definite seasonal character of their business. They then determined the additional value in inventory required to manufacture on a level basis. The result of their calculations showed that the cost of carrying additional inventory, both in storage expense and in interest on investment was more than offset by the cost of the additional investment which would be required in machinery and buildings to manufacture according to seasonal trend."[11] The guarantee

[11] E. S. Smith, *Reducing Seasonal Unemployment* (New York, McGraw-Hill, 1931), p. 237.

of an annual wage, by making a much larger part of the entrepreneur's cost a fixed cost, generally makes a constant level of production more economical than a seasonally fluctuating one. The guarantee by forcing a constant level of output will not, however, reduce costs below those incurred before the plan was in operation unless the entrepreneur were previously inefficient.

If the factor market is seasonal, production may be leveled by the storage of raw materials; if the product market is seasonal, by the storage of the semi-finished or finished product. The storage costs, which include the expense of physical storage and the interest on money tied up in the stocks, will vary as between firms in the same industry as much as between industries. Roughly speaking, the more excess warehousing capacity, the better the entrepreneur's credit, the smaller the physical storage cost in relation to the value of the product, then the larger is the quantity which is profitable for the entrepreneur to stock. Actual storage cost may be high because of pure bulk, because of the need for excessive measures to prevent deterioration or stealing, or because of anticipated losses through obsolescence. How these difficulties may affect decisions in a particular industry is indicated by the National War Labor Board's comment in its decision in the recent Steel case: "Apparently the products of this industry and the buying habits of its customers do not lend themselves readily to the manufacturing and storing of inventory. There are some minor exceptions, like standard pipe, wire products and semi-finished items. The great variety of sizes, shapes, finishes, treatments, and grades demanded and the physical problems of storing, handling, preserving against deterioration, when coupled with the sporadic buying characteristics of the automobile, heavy construction, railroad and oil-well industries make it plain that as a practical matter ***employment cannot be steadied by manufacturing for inventory when customers decline to use the production of the steel industry.***"[12]

The National Industrial Conference Board made a study in 1940 of 203 companies, employing 1,200,000 men, which had made some attempts to level out their employment. The methods most frequently used by entrepreneurs were: 64 per cent stocked finished products; 49 per cent transferred workers to where needed; 41 per cent used a flexible work week; 40 per cent trained workers for more than one job; 23 per cent started to manufacture a product the demand for which was complementary with the demand for their original product; and 22 per cent scheduled maintenance work in slow production periods.[13]

[12] U.S. N.W.L.B., *Report of the Steel Panel,* Case 111-6230-D (14-1, et al.), p. 148.

[13] N.I.C.B. *Reducing Fluctuations in Employment* (Stud. in Personnel Pol., 27, 1940), p. 9.

Actual practices of entrepreneurs are described in some detail in order to show what can be done to even out employment over the year and, therefore, to what extent annual wage guarantee plans are feasible. It is obvious that certain technological requirements, coupled with a seasonal demand of great amplitude and uncertainty, would make adoption of these plans impracticable in some industries. The law governing penalty overtime payments recognizes these difficulties and within limits exempts from penalty overtime payments employers who guarantee an annual wage.

The firm in a seasonal industry theoretically presents the same problems as does the firm in a non-seasonal industry. Our previous differentiation between the entrepreneur who can stock his product in Year One to sell in Year Two and the entrepreneur who cannot becomes a differentiation between the entrepreneur who can stock his finished product (or the factor whose supply is seasonal) in his slack season to sell in his busy season, and the one who cannot. The solutions are the same. The economic argument for determination of the maximum profit output for a year of guarantee has not changed. The only part of the problem which has changed is the length of the guarantee in relation to the time periods being discussed. This becomes important if the entrepreneur cannot level out production over the year, either by piling inventory or by some other means. In agricultural or food processing industries, where the busy season may be for only a few months of the year, the annual guarantee as we have described it is not applicable. To guarantee a fixed number of men an annual wage totaling a larger than optimum output payroll, or even equal to or slightly less than the optimum output payroll, would mean that the entrepreneur's labor supply would be too small in peak seasons, too big in slack ones. The possible solutions are to guarantee the annual wage of only a percentage of workers, to shorten the guarantee from an *annual* wage to the number of months the industry actually works, or to dovetail employment of firms in different industries. The latter, which is most preferable from society's point of view, is not always possible. Doing away with all seasonal unemployment may not be desirable since part of the labor supply, housewives, college students, etc., want only seasonal work.

Although the effects of a guarantee adopted by a firm which can even out its production over the year are generally the same as if the firm were in a non-seasonal industry, there are some differences. The guaranteed worker gains a larger increase in security since the incidence of layoff in a seasonal industry is much greater than in a non-seasonal one. The number of unemployed in the union will increase but each worker will be more steadily employed over the year. Although the

demand by the firm for labor in terms of hours may be the same or greater, its demand for labor in terms of workers will be less. Increase in fixed costs will make it profitable for many employers, for whom it was previously unprofitable, to level out their production. They will attempt to pass along the cost of maintaining inventories to some other firm in the chain of production or, if possible, to the consumer. One firm may wipe out its seasonal unemployment only to create it in another firm.

Adoption of an annual wage guarantee by an industry. It is possible that, with the extension of industry-wide trade union contracts, a whole industry may adopt an annual wage guarantee plan. As we have seen, if the guarantee imposes a labor cost which year after year is equal to or less than the labor cost consistent with a firm's optimum output, it will have no effect on the firm's volume of output or demand for labor. If all firms in an industry adopt such guarantees their initial total demand for labor hours will also be unchanged. To the extent that the firms, however, employ fewer workers for longer hours, as would be typical of those in seasonal industries, the industry demand for labor in terms of number of men will decrease. The supply curve of labor to the industry may shift to the right, resulting in a lower average unit cost and, depending on price policy of the firm and demand for its product, possibly greater production and employment. Regardless of the effect on average unit costs, the marginal cost of each firm will be lower and competition will, in the long run, drive down the product price. Recognition of discontinuity in the marginal cost curve, corresponding to the kink in the total cost curve of each firm, will temper the price competition. In the long run, however, profits will fall, disinvestment take place, and the industry demand for labor decrease.

If the guarantee imposes, year after year, a labor cost greater than that consistent with each firm's output, either because of poor planning by the entrepreneur or the extension of collective bargaining to include the size of the labor force, the industry demand for labor will decrease still more. If the industry has a competitive product market and it is assumed that firms are identical, each firm will earn "normal profits." The firms will react as they would to an increase in the cost of labor and, if they have great enough bargaining power, will substitute machinery for labor; if not, they will raise the price of their product. If the total demand for the industry's product is inelastic, revenue will fall, more disinvestment will take place, and there will be a greater decrease in the industry's demand for labor. If the firms are not identical or if the industry's market is typified by monopolistic competition, the high cost firms will be forced out of business. The remain-

ing firms, finding that the demand for their product has increased, will expand production and in so doing will tend to substitute machinery for labor. The ultimate effect on the price of the product is indeterminate because it depends on several variable factors: at what point of its cost curve each firm starts expanding from, the size of the profit margins of each firm, the elasticity or inelasticity of demand for each firm's product, etc. The plan will reduce the number of firms in the industry and increase the average size of those remaining. It will decrease both the short-run and long-run demand for labor by the industry and possibly raise the price of the product. From our analysis of a single firm in an industry typified by monopolistic competition and with a product which can be stocked from one year to sell the next, we can conclude that the decrease in demand for labor in this type of industry would probably be the greatest.

If the industry adopting guarantees is a seasonal one which has been induced to level production, it will attempt to force other industries—its distributive outlet, for example—to bear the increased cost of maintaining inventories. The adoption of such guarantees by one or a few industries may merely transfer the problem of seasonal unemployment to industries which previously were free of it.

The trade union, by force of bargaining power, might for a time maintain employment in the industry at an inflated level. The rate of profit in the industry would fall, however, and eventually capital would withdraw to more profitable industries. Therefore, in the long run, employment in the industry would decrease. If, however, as already pointed out, the supply curve of labor to the industry moves to the right, pushing down the wage rate as more people are attracted by the greater security, employment in the industry may increase without artificial support.

Adoption of an annual wage guarantee by all industry. General adoption of annual wage guarantee plans by all industry has been considered by some to be a means of minimizing the business cycle and unemployment. This favorable conclusion generally follows from observation of the successful working out of its adoption by a single firm—usually George A. Hormel and Company—or from tracing the favorable effects of such a plan on the consumption function and *ipso facto* on the national income.

It holds in this problem, as elsewhere, that one cannot argue from the particular to the general, from one firm's experience to society's. George A. Hormel and Company, which has had an annual wage guarantee plan since 1931, is the only factory in Austin, Minnesota, and its policies affect every family in that community. Therefore, proponents of annual wage guarantee plans state that the company's

successful experience "suggests that making part of our economy more stable will help to make the remainder more stable, and at the same time will give rise to new job opportunities."[14] The position of one firm in one town is not, however, analogous to that of thousands of firms with different cost curves competing among themselves in the same markets. Although Hormel's happy experiences with their plan, which incidentally has never been tested by depression,[15] might suggest that general adoption of such plans would have a favorable effect on society; it can do no more than that, merely "suggest."

The argument favoring these plans, which is developed from their influence on consumption, has more validity. Before discussing it, however, let us set up assumptions concerning the general adoption of these guarantees:

1. An annual wage guarantee plan is generally adopted by all employers;
2. The employer alone decides the size of his labor force;
3. The guarantee is equal to the total payroll consistent with each firm's optimum output;
4. The guarantee is for one year and is renegotiated annually; and termination dates of the guarantees, as those of present labor contracts, are scattered over the year.
5. If a firm goes out of business during the guarantee year, the government takes over the guarantee for the remainder of that year;

If the above program were enforced by government decree, what would be the effect on the business cycle? On employment?

A general guarantee will increase the rigidity of the cost structure in so far as industry does not have wage contracts prior to its introduction. Because it will make labor a fixed cost for a period of one year and, therefore, increase the entrepreneur's risk it will deter investment. On the other hand, a general guarantee will require greater investment by industry in the larger inventories necessary for leveling production. During the first years of the plan the velocity of money will increase as people with more secure incomes will save less. The inflationary effect will be felt until a new spending level is reached. Since we are primarily interested in whether guarantees can mitigate cyclical unemployment, let us assume that they have been generally adopted and for some reason the upper turning point of the cycle has been reached and the downswing has set in.

As a larger volume of inventories has been created the entrepreneur's

[14] United Steelworkers of America, *Brief Submitted . . . to . . . N.W.L.B.* Case No. 111-6230-D14-1, et al., p. 57.

[15] Not until 1936 were over 50 per cent and not until 1938 over 95 per cent of their employees covered by the guarantee.

desire to cut production will be greater; but he cannot economically cut production unless his total fixed costs including labor are small. Since this cost pattern is rare, production and employment in the economy as a whole will be more gradually curtailed and the upper turning point or crisis be less sharp. Wages and salaries paid out will not drop abruptly because wage cuts and firing of workers for, say, an average of six months are impossible.[16] The usual manifestations of a crisis which will immediately appear are a fall in prices, losses on the part of entrepreneurs, bankruptcies, and a smaller volume of investment. Output, employment and wage rates will continue much as before.

The stability of output and employment at the crisis will be a new phenomenon, but that of wage rates will not be. The latter, therefore, cannot be considered a special effect of the general adoption of annual wage guarantee plans. Since the government will take over the guarantees of firms going out of business, employment and wage rates are both maintained and it is thus reasonable to assume that wage earners will maintain their demand. Many proponents of these guarantees identify the effective demand of wage earners with that of consumer purchasing power and imply that maintenance of the latter will ensure maintenance of employment. These ideas are implicit in the following statement of the labor panel in the recent Steel Case: "*The maintenance* of purchasing power sufficiently high to maintain the present employment level *is precisely the purpose of the annual wage.*"[17]

The fact that wage earners will continue to spend the same amount as they did before does not mean that total consumer demand will be the same as before. All consumers are not wage earners. Lower dividends and entrepreneural losses will mean some cut in consumer consumption. Consumer expenditures most sensitive to the business cycle are those spent on luxuries, on goods and services which the wage earner does not buy. Among items classified as those with a high income elasticity are the following: meals and beverages purchased in dining cars, fur storage and repair, jewelry and watches, domestic service, brokerage charges and investment counseling, taxicabs—fares and tips, admissions to theater and opera, etc.[18] It is true that only a small amount of total expenditures fall in these categories, but it is these expenditures which will fall first and it is in

[16] Since the termination dates of the guarantees are scattered over the year, six months would be the average of the unfulfilled portion of annual guarantees in force when the crisis strikes.

[17] U.S. N.W.L.B., *Supplemental Opinion of Labor Members of the Panel.* Case III-6230-D (44-1, et al.), p. L-43.

[18] *Survey of Current Business,* Jan., 1945, p. 10.

these in which we are most interested, because of the limited time element in this type of guarantee.

It is also possible, of course, that if workers are well informed both as to general economic conditions and those in their own industry and plant they, too, will restrict their expenditures. This seems unlikely for three reasons: (1) Wage earners are not that well informed nor is it necessarily to the interest of their union to so inform them. (2) Many workers spend most of their earnings on necessities and cannot greatly restrict their expenditures. (3) People do not change their consumption habits *in advance* of a decline in income; in fact, legal contracts (rent, installment buying, etc.) and inertia delay curtailment even after income has dropped.

Let us grant that annual wage guarantees will maintain consumer purchasing power at the upper turning point of the crisis, at least for a period of six months. Is this maintenance of purchasing power sufficient to stave off a depression?

Although there are different beliefs as to the cause of depressions there is general agreement that decline in business profits until losses are eventually realized and a falling off of investment are among the main manifestations. Not until profits and investment are revived will an upswing set in. The cure of a depression does not necessarily have to be the removal of the causes which created it, but it must be, if we are to retain our present economy, something which clearly will encourage investment. Impetus to invest may originate in the possibility of higher profits because of the lowering of costs through technological advances, falling wages, falling interest rates, etc.; or investment may be directly stimulated by an increased demand for more producer goods either on part of private business or the government. Mere maintenance of purchasing power cannot induce net investment expenditures and thus prevent or minimize a depression. Net investment is derived from consumer demand only if the latter increases, so that existing plant and equipment is insufficient to satisfy it. Merely maintained consumer demand does not require for its satisfaction any additional producer goods. Maintenance of consumer purchasing power can only affect investment if it is upheld over such a long period that the plant and equipment satisfying that demand wears out and creates a need for replacement investment. This effect is unlikely because of the very shortness of the guarantee. The maintenance of purchasing power can prevent a depression, defined in terms of mass unemployment, only if it continues until investment revives. This actually happened, although without artificial support, in the minor 1923-24 recession.

If the guarantee were for a longer period of time so that wage

earners' demand could be maintained, say, for two years, it would probably—through eliminating the depressing multiplier effects of loss of investment and by giving time for greater liquidity and creation of demand for replacement investment—both decrease the amplitude and length of the fluctuation. This, although theoretically an interesting case, has little practical application since it is hard to conceive of a voluntary or imposed guarantee of four years. Similar results in lesser degree would be obtained, however, in so far as the trade unions can, year after year, by superior bargaining power force the employers to hire more than they otherwise would have hired. If *all* industry were so treated the industrial structure would adjust to the increase in the cost of labor and would not, as under partial adoption of the guarantees, be continually distorted to meet the increasing labor costs in different sectors as the latter adopted guarantees. This situation is hard to picture as a practical procedure since it implies either that each trade union has greater power than the firm with which it is bargaining or that the government will enforce by decree an over-all, inflated employment level. During the period of adjustment new investment generally would be deterred by the increase in labor costs which would initially reduce profits. In the early stages some new investment would occur as capital shifted to industries using relatively less labor. New investment would also be induced from the increase in consumption out of the higher incomes of the inflated employment level. It would not continue to be induced, however, when the effects of the increased income on money velocity and the income itself leveled off. Since income that previously was part of profits would, under the revised assumptions, become wages, some redistribution of the national income would be effected in the short run. Gradually new investment, deterred by small profits, would decrease and unemployment, as guarantees terminate, would increase. The former redistribution of income would be reversed and probably the favorable effects outweighed. The whole process would take several years.

The question of whether over-all guarantees with government backing can be successfully fitted into complementary federal fiscal policies cannot be discussed here. General adoption of annual wage guarantees under the original five assumptions will not prevent a depression and cyclical unemployment; it will merely postpone them.[19] Annual wage

[19] The fact that there are larger inventories in existence does not necessarily mean that the drop in production, when it comes, will be more severe. The increase in inventories is necessitated by the leveling of production and, although inventories may be at a higher level at the beginning of the depression, they also cannot fall to as low a level as they would if there were no guarantees.

guarantees will wipe out seasonal unemployment. The solving of seasonal unemployment will mean that no workers are partially unemployed but a larger number are fully unemployed. This may be desirable. Continual insecurity of employment and frequent unemployment is destructive of human resources. Attempts to dovetail relief and public employment with intermittent private employment, especially when people have attachments to particular industries and even firms, are more difficult than to provide for outright unemployment. In the latter case people are more willing to learn new skills and build up new employer-employee relations. An *annual* wage guarantee is not, however, of long enough duration to solve the problem of cyclical unemployment. Even if such guarantees of the necessary duration—that is, of the average cycle—were possible we would be confronted with a new problem of a large "hard core of unemployment." There would be no *cyclically* unemployed; but a greater number of secularly unemployed.

Proposed annual wage guarantees do not increase the real national income; they merely redistribute it. If our present economy were a full employment economy, general adoption of these guarantees would be highly desirable. It would substitute the economic cost of keeping idle goods for the more than economic cost of maintaining idle labor and plant. But in a society which has trouble in providing employment for all its members, a situation in which 90 per cent of the labor force is fully or partially employed and 10 per cent unemployed may be preferable to one where 80 per cent are fully employed and 20 per cent unemployed.

BRITISH POLICY AND A WORLD ECONOMY

By E. M. BERNSTEIN*

I

The primary economic objective of the United Nations is the restoration of a unified world economy in which international trade and investment can be carried on without the restrictions that isolate countries and the discriminations that divide them into *blocs*. While international trade and investment cannot be entirely freed from restrictions and discriminations, such practices can be kept within moderate limits through international agreement and under international supervision. In this way, progress can be made at once toward a world economy.

The restoration of a world economy requires the participation of all the great trading countries in a common program directed toward this end. The essentials of such a program are already clear. It would require international coöperation to expand trade and investment by reducing tariff and other barriers to trade, by facilitating international investment for productive purposes, and by maintaining orderly exchange arrangements. If the United States and Britain were to adopt such a policy, there can be no doubt that they would have the support of the other nations. On the other hand, if these countries were to pursue conflicting policies, the restoration of a world economy would be impossible.

The program for international economic coöperation has received widespread approval in the United States. In large part this is a reflection of the conviction that a world economy, where exporters sell and importers buy in the best markets, offers the greatest general advantages from international specialization. It would be a mistake, however, to overlook the tremendous importance the American people attach to international economic coöperation as part of the broader program for a peaceful and prosperous world. The American people are committed to world organization through the United Nations. They have shown through adherence to the International Fund and Bank,

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through expansion of the Export-Import Bank, and through the extension of the Reciprocal Trade Agreements act that they are prepared to implement political coöperation with economic coöperation.

In Britain, public opinion is not fully formed on the program to restore a world economy. As in this country, there seems to be a strong preference to try, if possible, to establish international responsibility for the solution of international economic problems.[1] The general attitude is that in the long run, British prosperity depends on the widest possible interchange of goods in a system of multilateral trade and payments. But there are short-run problems of enormous magnitude with which Britain is immediately confronted. And there remains the question whether the world economy that collapsed in the 1930's can be made to work again in the post war period.

II

These uncertainties have made it possible for small but influential groups to urge a policy intended to serve what they regard as Britain's special interests in international economic affairs. They assume that Britain can secure advantages from planning her trade within an area responsive to a British policy largely reflecting British needs. At best, such a policy may be no more than an attempt to isolate a so-called high trade area from what are regarded as external forces of depression originating in an underemployed area, that is, the United States.[2] At worst, it may involve an attempt to exploit the favorable position of a large importing country in a world in which export markets are inadequate to absorb the surplus of countries highly dependent on export trade.

Strict classification of the opponents of British participation in a world economy is impossible. Three major groups are clearly evident, although there is much in common in the programs they propose.

One group advocates a policy of bilateral trade arrangements. They deny that general multilateral trade does bring about the largest volume of trade and the greatest advantages from international specialization. They hold that for Britain, particularly, multilateral trade offers no significant advantages while exposing her to the risks of instability abroad. Any decline of imports in one country, they say, necessitates a general contraction of trade; otherwise countries that maintain their

[1] An able plea in favor of British participation in the program for a unified world economy is made in the Labor publication, ***Political and Economic Planning,*** in the pamphlet "After Bretton Woods," No. 225 (London), September 15, 1944. See also the editorial in ***The Manchester Guardian,*** September 17, 1945.

[2] This has been the dominant theme of many articles in ***The Economist*** (London). See particularly, "A High Trade Area," September 22, 1945, pp. 404-06.

imports will be stripped of their monetary reserves. In contrast to this, they argue, Britain could enter into bilateral agreements with a number of countries for the import of their products with payment to be made in the form of an equivalent export of British products. Such bilateral agreements would assure a volume of international trade essential to the needs of both countries. In time, the bilateral agreements could be broadened to cover an enlarged sterling area which could secure for itself the benefits of multilateral trade on a limited basis through central clearing in London.[3]

A second group advocates a policy of increased state control of international trade. They urge that the British government enter into long-period agreements with other governments for the bulk purchase of staple commodities, through a government trading agency. Payment for such purchases would be made in sterling which could be used only to buy British products. Such agreements, they argue, would not only assure Britain a large and steady flow of imports, but would also provide a market for British exports in an amount adequate to meet her import needs. While this group gives greatest emphasis to bulk purchase by the government, they would place other imports under the supervision of import boards, to secure the most effective use of the foreign exchange resources accruing from British trade and investment.[4]

A third group advocates a policy of continued maintenance of imperial preference and the sterling *bloc*. They hold that the economic and political future of Britain depends upon the strengthening of the ties between Britain and the members of the Commonwealth. On the economic side, they favor the continuation and the extension of the trade preferences under the Ottawa Agreements of 1932. On the financial side, they favor the retention of many of the wartime devices which permitted transferability of sterling among the countries of the sterling area and strict control of transactions with countries outside the sterling area. While economic advantages are claimed for these arrangements, the fact is that this group ultimately favors such a policy for political rather than economic reasons.[5]

These various groups have in common their support of a policy to

[3] T. Balogh, "The Importance of Multilateral Trade for Britain," Oxford Inst. of Stat., *Bulletin*, August 12, 1944; Paul Einzig, "Schachtian Devices Reëxamined: Bilateralism v. Multilateralism," *The Banker* (London), September, 1944, pp. 86-89.

[4] For a statement of this view, see the speech by Norman Smith, Labor member for Nottingham South, *Parliamentary Debates* (Hansard), House of Commons, August 20, 1945, pp. 372-78.

[5] Lord Beaverbrook and L. S. Amery are outstanding advocates of Empire trade preference. See Lord Beaverbrook's editorial in *The Sunday Express* (London), September 16, 1945, and L. S. Amery's letter to *The (London) Times*, September 15, 1945.

establish a British economic *bloc*. They differ among themselves on the principal objectives to be attained and, to a lesser extent, on the measures to be used. The supporting arguments for this policy rest so completely on an assumption of special conditions and special needs that it becomes difficult to find an acceptable basis for critical examination of the policy advocated by these groups. No one can deny that state control of international trade can be used to secure a steady flow of imports through governmental agreements and that imports can be diverted in this way from less urgent to more urgent needs. No one can deny that it is possible to secure more favorable terms of trade by exploiting the strong position of a large importing country in a world of inadequate export markets. But the policy of a British economic *bloc* cannot rest on such special cases.

If a world economy could bring about a large expansion of trade, the volume of British imports could be increased and British needs could be met more fully without discriminatory arrangements through state trading organizations. And a large expansion of world trade, within a system of multilateral payments, could increase the aggregate gains and Britain's advantages from international trade. There are no economic benefits from a British *bloc* that could not be secured more fully with an effective world economy; and there are many dangers to Britain and the entire world that would arise from a conflict between a British *bloc* and, say, an American *bloc*. The argument for a British *bloc* ultimately rests on the implicit doubt that a world economy can function. It is important to realize this, for the strength of these groups does not derive so much from the program they advocate as from the widespread fear in Britain that a world economy may not work.

The advocates of the policy of a British economic *bloc* have a tactical advantage in the present debate, for Britain still has the extensive controls which were instituted during the war. In brief, these controls involved the mobilization and conservation of foreign exchange resources in Britain and the sterling area. The use of foreign exchange was strictly limited by complete control of imports and payments outside the sterling area. Imports from the sterling area and other expenditures within this area were paid for in sterling which was held in the form of sterling deposits or treasury bills. Sterling was made non-convertible and its transferability limited to countries within the sterling area. British-owned foreign assets were vested by the treasury and used for war expenditures abroad. The dollars and other convertible currencies earned by sterling area countries were placed in a common pool and were allocated for use where they were most essential for the war effort. These measures enabled Britain to conserve foreign

exchange to assure herself of essential supplies during the war; they could be used for similar purposes after the war.

As a matter of fact, until Britain's post-war balance-of-payments problems are solved, some of these controls will have to be retained. It is inevitable that consideration should be given to the possibility of continuing and even extending such arrangements through bilateral agreements if they become the only means of meeting the post-war problems. But the fact is that few people believe in a British economic *bloc* for its own sake. If Britain could secure aid in meeting her post-war problems without the use of these wartime devices, the greatest objection to acceptance of the program for a world economy would disappear in Britain. Without such aid Britain would be compelled, by default, to seek a solution to her payments problems through bilateral agreements within an enlarged sterling area.

The hesitation and doubt on British international economic policy are understandable. They are not wholly due to the special post-war problems with which Britain is now confronted. Among the great industrial countries, Britain is almost unique in her dependence upon imports of food and raw materials. For this reason Britain stands to gain to an unusual degree from the efficient functioning of a world economy. For the same reason, however, a breakdown of the world economy would seriously affect Britain. The disastrous experience of the 1930's has made many Britons cautious. The advantages of expanded international trade and investment are admittedly great. But there may be defects in the system. The plans for international economic coöperation have provided new safeguards against the breakdown of the world economy. But are these safeguards enough?

These are the doubts that have troubled the British people. In explaining the attitude of caution toward the program for international economic coöperation, the former Chancellor of the Exchequer, Sir John Anderson, said:

> We emerge from the struggle with a gravely distorted economy, with an enormous burden of external debt and a balance of payments problem such as we have never before had to face. The system of international economic collaboration to be established now must profoundly affect our ability to play any useful part in the affairs of the postwar world and may even involve our very standards of life. We must determine our course of policy not in relation to this particular plan or that but upon a review of our situation as a whole. We must not assume that the cure for all our troubles was found at Bretton Woods. The time is at hand when we must decide and we shall do so heartened immensely by our knowledge of the part which America is clearly determined to play.[6]

[6] Address to the American Society, London, July 4, 1945.

The attitude of the Labor Government on international economic coöperation does not differ significantly from that of its predecessor.[7] This is to be expected. Britain's international economic policy will be determined not with reference to broad principles, but on the basis of practical answers to these urgent questions: Can Britain meet her post-war balance-of-payments problems without a continuation of the wartime restrictions? Can Britain assume the risks of full participation in a world economy?

III

Britain's international payments position requires the solution of three distinct problems. The first is to restore a balance in her current international accounts by expansion of British trade. The second is to finance the deficit in the British balance of payments during the post-war transition. The third is to make some permanent arrangement on the sterling balances accumulated during the war.

1. The most important British problem is to restore her export trades as quickly as possible to the level necessary to pay for the imports essential to the British economy. This is in a sense the critical problem. On it depends the obligations that Britain can safely assume in financing her balance of payments in the transition period and in funding the sterling balances. Unless Britain can with reasonable assurance balance her current international payments after the transition period without the retention of wartime controls, she can give only qualified adherence to the program for a world economy.

In 1938, retained British imports amounted to about 4,300 million dollars. Exports of British products amounted to about 2,300 millions. The excess of merchandise imports was largely offset by net earnings of 1,000 millions from overseas investments, 500 millions from shipping and something less than 200 millions from banking, insurance and similar financial services.[8] This balance of payments has been seriously impaired by the war. Net receipts from foreign investments have been reduced by nearly one-half by sales of British-owned foreign assets. Receipts from shipping and financial services have also fallen, although

[7] As a matter of principle, it would be expected that the Labor Party would prefer a policy of international coöperation. "It would be strange indeed if Labour were to seem less willing than the Conservatives to commit their country to the paths of international coöperation. It is justifiable ground for pride among Labour men that the Party has always been internationalist, always favoured the development of international institutions and their extension from the political sphere to that of economic affairs." Edward Charles, "Labour and Bretton Woods," *The Banker* (London), September, 1945, p. 139.

[8] *Board of Trade Journal,* February 23, 1939. League of Nations, *Balances of Payments 1938* (Geneva, 1939), pp. 125-36.

they will recover with the expansion of trade. To make good these losses of income from abroad, British exports will have to be increased by 50 per cent over the 1938 volume—that is, from 2,300 millions to 4,500 millions, allowing for dollar prices one-third above the 1938 level. Such a level of exports would permit Britain to import the same volume of goods as in 1938, at a post-war cost of about 5,600 millions.

To expand exports to such an extent, Britain must increase the efficiency of her export industries. There can be no doubt that British industries are capable of developing technical efficiency of a character which would permit them to compete for a fair share of the world's export markets. Some of the newer war plants have developed and utilized the most modern industrial techniques. British engineering has, on the whole, been progressive during the war. But the older export industries, such as textiles, coal and steel, seem to suffer from unenterprising management and are far behind in their production methods. British opinion is alert to the significance of increased productive efficiency in these industries.

The immediate need for exports is so urgent that every British industry may have to be required to take full advantage of export markets. It is to be hoped, nevertheless, that in time less dependence will be placed on textiles and similar simple manufactures. While there will always be some demand for British specialties in these fields, the expansion of British exports must ultimately be concentrated in machinery, electrical equipment, chemicals and related fields, where innovation and technical progress are the bases for leadership. The fact is that the great industrial countries cannot continue indefinitely to export the simpler manufactured goods which countries begin to produce for themselves as they become industrialized.

Though British industries may be prepared to export in sufficient volume to meet this program, its achievement depends on the ability of the world to purchase British exports. If total world trade is large enough, Britain can sell sufficient exports without a serious deterioration in the terms of trade.[9] In the 1930's, exports of British products constituted about 11 per cent of total world exports. With the elimination of Germany and Japan as major exporters during the next decade, Britain should have no difficulty in retaining in the post-war period at least this share of aggregate world exports. To export 4.5 billions of British products, assuming the same ratio in the post-war period,

[9] The term as used here does not necessarily mean a fall in export prices relative to import prices. A deterioration in the terms of trade should mean a fall in income in export industries at home as compared to income in export industries abroad. Properly interpreted, a fall in British export prices resulting from technical improvements does not involve a deterioration in the terms of trade.

world exports would have to be at least 40 billions. As a matter of fact, as world exports increase, there is some tendency for British exports to rise more than proportionately.

Can world exports be increased to this level? In 1938, total world exports amounted to 22 billion dollars. With a price level about one-third higher in dollars than in 1938, this would be equivalent to 30 billions at post-war prices. The minimum goal of 40 billions in world exports involves an increase of only one-third in volume over the pre-war level. Such a level of exports is a modest goal for a world with greatly increased ability to produce. The Bretton Woods program will facilitate economic reconstruction and the expansion of trade. The reduction of trade barriers will be of further help in this direction. If the United States maintains a high national income, world exports of 40 billions could be attained in 1948, and British exports should reach 4.5 billions.

2. With favorable conditions Britain may in about three years restore her current international economic position. In the meantime, she must find the foreign exchange resources necessary to finance her essential imports. To do this Britain will need help from the United States and the Commonwealth. This help, if it is to be most effective, should be prompt and generous; and it should take a form that will not aggravate Britain's balance-of-payments problem.

Britain's immediate problem stems in large part from the policies adopted by the United Nations under the leadership of the United States. The principle which guided the international financial relations of the United Nations after March, 1941, was mutual aid as manifested in Lend-Lease and Reverse Lend-Lease. This principle made it possible for each country to devote itself to the common war without diverting resources to producing goods for export to pay for supplies from the United Nations. Until this country established Lend-Lease, Britain used her accumulated gold and dollar resources and disposed of much of her foreign investments in order to maintain the flow of goods for the war effort. Production for export of necessity was given high priority as a means of paying for supplies from the United States. Lend-Lease was designed to enable Britain to continue to acquire supplies while devoting more of her resources to war purposes in Britain which had become the major staging area for the war effort of the Western allies.

In response to the new situation created by Lend-Lease, Britain reduced her export trade sharply until in 1944 it was only 30 per cent of the 1938 volume.[10] Gradual reconversion of export industries was

[10] *The Export Trade of the United Kingdom for the years 1942, 1943 and 1944*, Board of Trade, London, 1945.

begun in 1945 with the hope that by the end of war with Japan, exports would have been restored to the pre-war level. The sudden end of the war made it impossible for Britain to reach this level of exports and the immediate termination of Lend-Lease cut off imports under this program. It has, therefore, become urgent for Britain to find other means of financing essential imports until her exports reach 4,500 million dollars a year. Even with favorable conditions Britain will need three years to reach this export goal and to balance her international payments. In the meantime she must continue to import food and raw materials for her own economy and she must help meet the import needs of some sterling area countries. If this is to be done without severely restrictive measures, Britain will need aid.

The amount of aid that may be needed over a three-year period has been estimated by the British Mission on the order of 3 to 6 billion dollars.[11] Obviously, if Britain can maintain a tight program of imports and expand her exports more rapidly, the deficit may be less. On the other hand, if there is some delay in the expansion of British exports, the deficit may be somewhat larger. In one way or another, Britain will, of course, find the means to import during the transition. But if she can secure aid without unduly burdening her future balance of payments, Britain can more quickly abandon the wartime measures which involve a considerable restriction of imports from the dollar area and a greater degree of self-sufficiency within the sterling area. Failing such aid, Britain would feel compelled to continue her wartime trade and financial arrangements during the next few years and could consider full participation in a world economy only after an extended transition period.

3. As the result of the war Britain has incurred large overseas debts in the form of sterling balances (deposits in London or British treasury securities) held largely by the monetary authorities and banks in the sterling area. The greater part of these obligations was incurred in meeting Britain's war expenses overseas. Britain used this means to secure from sterling area countries the same kind of help that was secured from the United States through Lend-Lease and from Canada through Mutual Aid. The form in which this help was given has resulted in a large debt in liquid form which cannot under the circumstances be convertible into other currencies and may even prevent the resumption of convertibility of sterling for current trade purposes.

Britain cannot deal with this problem as an ordinary debt. To

[11] Statement by Lord Keynes on the British position, New York *Times*, September 13, 1945.

liquidate 14 billions of sterling indebtedness even over a period of 50 years would require annual payments of 550 millions a year on a 3 per cent interest basis. The expansion of Britain's pre-war exports by 50 per cent is difficult; but it can be done. To add to this an obligation of 550 millions a year, in addition to the indebtness that will be incurred to finance the transition, would be beyond Britain's capacity, certainly within the next decade. To secure an export surplus of 550 millions a year to service the sterling balances would require in fact an expansion of exports on the order of 700 millions a year if imports for British use are not to be curtailed below the low 1938 level.[12]

In order to resume the convertibility of sterling, some means must be found to reduce the aggregate sterling indebtness and to finance it without heavy interest charges. Britain can legitimately request the holders of sterling balances to reduce the aggregate of their claims as part of their contribution to the war. It is worth a good deal to India to have kept Japanese conquest from penetrating to that country; it is worth a good deal to Egypt and the Middle East to have kept German and Italian conquest from that area. The war payments which Britain met for the defense of these areas, when difficult political negotiations could not be undertaken and when the aggregate cost of the war could not be determined, should now be re-negotiated so that these areas and the British Empire countries assume a fair share of the cost of their own defense.[13]

It is not practicable to ask these countries to give up all of their sterling balances as their contribution to meeting the costs of the war. They have already made large sacrifices in providing the real resources for carrying on the war in return for payments that can be used only for deferred imports. For some of these countries, the sterling balances represent nearly all of their monetary reserves. A reasonable compromise can be made by reducing the sterling balances and arranging for their gradual liquidation. This would take account of the needs of the sterling area countries for monetary reserves and their obligation to share in the costs of the war.

[12] It is estimated that British exports involve on an average 20 per cent of imported raw materials. To keep British consumption of import goods fixed, any given export surplus must, therefore, involve increased exports 25 per cent above the surplus and imports of 25 per cent of the additional exports. That is, an export surplus of 550 millions could be financed by exports of 687.5 millions and imports of 137.5 millions for raw materials.

[13] In all of these areas prices paid by Britain have been unusually high. As a matter of equity some adjustment could be made on this basis. In 1944, wholesale prices in India were 302, in Egypt 311 and in Iraq 556 as compared with 171 in England, all relative to the first six months of 1939. *Monthly Bulletin of Statistics,* League of Nations, April, 1945 (Vol. XXVI, No. 4-A), p. 121.

With a substantial reduction in sterling balances Britain could undertake to make convertible immediately an amount of sterling needed by these countries as normal working balances to finance their international trade. The remainder could be funded in sterling annuities payable over a considerable period without interest. Even a moderate rate of interest would increase enormously the burden to Britain in liquidating the wartime balances. Furthermore, nearly all of these countries financed their accumulation of sterling balances by monetary expansion. The increase in their sterling balances corresponds largely to the increase in cash balances in these countries and involves little or no interest cost to their monetary authorities.

These are the special balance of payments problems that may cause Britain to continue and extend the wartime arrangements. If they can be solved, Britain should be in a position to relax promptly most of the wartime restrictions and to participate whole-heartedly as one of the leaders in the program for international economic coöperation.

IV

The second basis for hesitation in British policy is the fear that a world economy will not in practice work. It is generally admitted in Britain that the ideal is a system of trade in which countries buy and sell in the best markets and in which the proceeds of exports to other countries can be used to pay for imports from any country. But such a system depends upon a large and stable volume of international trade. Otherwise, the world economy may break down.

There is a good deal of merit in this view. Necessary adjustments in the balance of payments can be made more easily with a large volume of trade. Under such conditions, marginal imports are likely to be less urgent, and if a reduction in imports becomes necessary, its effect on the economy is certain to be less serious. Exports are likely to be more sensitive to price, and any given reduction in export prices (in terms of the currencies of importing countries) will tend to induce a relatively large expansion of a country's exports.[14] On the other hand, when the volume of world trade is small, more of a country's imports are the essentials of its economy. A reduction in imports under such conditions may involve a serious burden to a country. And with a smaller volume of trade, the composition of world exports is likely to consist in larger part

[14] It should be noted that, with a world volume of exports of 50 billions, any given change in the price of a country's exports goods should, assuming the same price elasticity of demand in importing countries, have twice as large an effect on a country's exports as with world exports of 25 billions. If the magnitude of adjustments is not proportionately higher, this greater effect would of itself facilitate adjustments in a country's balance of payments.

of the specialties of the trading countries. An expansion of exports for any one country becomes for this reason more difficult.

Large and sudden fluctuations of trade have a serious effect on the world economy because they are inevitably accompanied by a serious distortion in the pattern of international payments. Such fluctuations are the consequence of major business cycles. When a great depression occurs, the volume of world trade falls sharply in response to the reduced levels of income and production. The decline in imports and exports cannot be uniform for all countries. This is so because the fall in income differs from country to country and because there are large differences as between countries in their need for import goods and the world's need for their export goods. As already stated, the restoration of balance in a country's international payments becomes more difficult as the volume of world trade falls, for each successive reduction of imports becomes more burdensome and the maintenance of exports more difficult.

In the past, two other factors have served to intensify the distortion of international payments with a great depression. First, the great industrial countries, in which depression tends to be deepest, are the principal source of funds for international investment. With the distortion in the pattern of international payments, foreign investment may stop. As a consequence, countries that have become adjusted to an inflow of capital are confronted with the necessity of sharply reversing their import-export trend. Second, in a world of limited trade, the one way some countries may find open to make necessary adjustments in their international payments is through restrictions on imports and through discriminatory arrangements to expand exports. This was the experience of the 1930's.

As a practical matter the level and stability of international trade and investment depend on the great industrial countries. The less developed countries have generally been prepared to import as much from the great industrial countries as their accruing exchange resources, from exports and foreign investments, would permit. Fluctuations in world trade commonly originate in the great industrial countries where fluctuations in home investment result in large changes in the national income and in the level of imports. In the less developed countries, where the investment industries are of little importance, depression is more likely to be a consequence of a decline in their exports. In effect, it is a response to depression in the great industrial countries transmitted to the less developed countries through changes in international trade and investment.

The prospects of maintaining a large and stable volume of international trade and investment are far brighter than in the 1930's.

In the great industrial countries public opinion is aware of the necessity of preventing great depressions and is insistent on a policy of maintaining employment. Nevertheless, no assurance can be given that a large and stable volume of international trade and investment can at all times be maintained. But provision has been made in the program for a world economy to minimize the difficulties that arise from a sudden reduction in international trade and investment and to facilitate necessary adjustments in the pattern of international payments.

A sudden reduction in trade compels countries whose exports are most sensitive to international business conditions either to reduce imports or deplete their monetary reserves. With the International Monetary Fund, such countries can obtain assistance that will help them to maintain temporarily their flow of imports. In the meantime, it would be expected that concerted action would be taken to bring about recovery and to restore international trade. Because help from the Fund is limited in amount, a country cannot on this account avoid taking corrective measures where they are necessary.

Under the International Monetary Fund, necessary adjustments in a country's balance of payments can be made without compelling serious deflation at home or imposing deflation on other countries. If the change in a country's position is due to depression abroad and balance can be restored with the expansion of trade, the Fund might agree that temporary exchange control, which limits the incurring of foreign obligations, would be justified. If a fundamental change has occurred in a country's international economic position, it must somehow lower its export prices relative to import prices. Where a country can make the adjustment through a reduction in domestic costs, the Fund would not be involved. On the other hand, where such a policy would require serious deflation and depression, the Fund would undoubtedly concur in a proposal to alter the exchange rate and to restore in this way the balance of payments of a country. At the same time, the Fund would protect other countries from the impairment of their balance of payments through unnecessary restrictions on current international transactions and through competitive exchange depreciation.

There is the special problem of preventing a compulsory all-round reduction in the volume of trade if one of the great trading countries should suffer a serious depression or should for some other reason have a large and persistently favorable balance of payments. Consider what would happen if a major currency should become scarce in a world economy in which all currencies are interconvertible and in which no provision is made for dealing with a general scarcity of a currency. Each country with a deficit would take measures to limit its imports. The effect in restoring its balance of payments is the same whether the

reduction in imports is from the country whose currency is scarce or from other countries. To the extent that imports are reduced from other countries the problem is not, in fact, solved; it is merely shifted, and other countries are then faced with the necessity of reducing their imports. Only as imports are reduced from the country whose currency is scarce is the problem really solved. An attempt to adjust imports to the scarcity of a major currency could in this way result in a large and general contraction of international trade.[15]

This problem is not likely to arise if serious depression can be avoided in the great industrial countries. So long as these countries import and invest abroad on a scale commensurate with a high national income, their currencies cannot remain scarce. Nevertheless, the Fund must take account of the possibility of scarcity of a currency and it must provide the means for dealing with the problem. The Fund recognizes frankly that when a currency is scarce, the complete interconvertibility of currencies cannot be maintained and it is necessary for other countries to limit the incurring of obligations in the scarce currency. Therefore, when a currency is declared scarce, the Fund will allocate its sales of the scarce currency and members will be authorized to limit exchange transactions in the scarce currency. In this way the Fund would prevent a general reduction in trade that would result from a vain attempt to imitate a non-existent system of freely and fully interconvertible currencies.[16]

There should be no attempt to gloss over the difficulties of making a world economy work. It is far better to recognize the difficulties and to provide a practical means for dealing with them if they should arise. The program for a world economy is concerned with coöperative measures to facilitate the maintenance of a high and stable level of international trade and investment. No doubt, there will be times when trade and investment will decline. For such contingencies, specific provision is made to minimize the hardships and to prevent a breakdown in international economic relations.

V

Public opinion in Britain would welcome any plan that would enable her to adopt a policy of prompt and complete participation in the program for a world economy. If the special problem of the transition could be solved, Britain would be prepared to assume the risk that a

[15] E. M. Bernstein, "Scarce Currencies and the International Monetary Fund." *Jour. Pol. Econ.*, Vol. LIII, No. 1 (Mar., 1945), pp. 1-14.

[16] Senate Committee on Banking and Currency, Report No. 452, 79th Cong., 1st sess., "Participation of the United States in the International Monetary Fund and the International Bank for Reconstruction and Development" (Washington, 1945), pp. 21-22.

world economy can be made to work.[17] This, in substance, is the position that British spokesmen have always taken. Now, with the end of the war, the magnitude of Britain's transition problem is clear. The countries that stand to gain most from the restoration of a world economy—Britain herself, the United States, Canada, and the countries of the sterling area—should in their own interests agree on a program that will enable Britain to meet this problem.

A program for this purpose will involve financial aid on terms within Britain's capacity to repay and in an amount that will enable her to dispense with the restrictive and discriminatory arrangements designed to meet her transition needs. The aggregate amount of such aid from the United States and other countries would have to be about 5 billion dollars. Clearly, it would not be desirable to reduce the amount to a level that would raise doubts as to its adequacy and require the retention of harmful restrictions. The aid should be in the form of credits repayable over a long period after Britain's balance of payments has been restored, repayment to begin in the post-transition period, about five years from now. The interest rate must of necessity be less than would be expected on a banking basis. Britain will have to meet not only the transition debt, but also a large part of the wartime sterling debt. The burden should not be increased by heavy interest charges.

If the transition problem were met, Britain would be in a position to establish the full convertibility of sterling hereafter derived from current transactions. Obviously, accumulated sterling balances could not be made freely convertible, even when they are needed for current trade in other countries, until satisfactory arrangements are made to reduce by 40 per cent or more the balances accumulated by the sterling area countries as a result of Britain's war expenditure. When this has been done, some part of these sterling balances, not to exceed a billion dollars, could be held as working balances convertible under the terms of the International Monetary Fund, and the rest could be funded into long-term sterling obligations without interest. Because such a settlement of the sterling balances is essential to enable Britain to assume the obligation of immediate convertibility of sterling, it should be part of the arrangements made by Britain to deal with the transition problem.

If means were provided to enable Britain to maintain her imports during the transition, and if sterling were made convertible, it would be possible to abandon promptly the sterling area dollar pool. Under this wartime arrangement, the dollar earnings of the sterling area countries were sold to Britain for sterling and were kept as a common pool

[17] "Bretton Woods, The Problem of Anglo-American Economic Relations." Six articles in *The Economist* (London), July 21, 28, August 4, 11, 18, and 25, 1945.

to meet the needs of the sterling area for dollar exchange. Dollars from this pool were sold by Britain for sterling for the most urgent war purposes. The dollar pool was a necessary war measure. It made possible mobilization of the dollar exchange of the sterling area for essential war needs. Without it, the United States would have had to provide greater Lend-Lease aid or the war effort of the sterling area would have been impaired. Neverthelss, the continuation of the dollar pool is not consistent with a world economy, for it may compel a restriction of trade with the United States by countries whose current international payments are in balance and whose receipts of dollar exchange are adequate to pay for their imports from the United States.

In the last few months Britain has entered into currency agreements with each of a number of countries.[18] Under most of these agreements, the two signatories undertake to provide each other in limited amount with the currencies needed for making payments in each other's territories. There is nothing in an agreement of this character that need be in conflict with the broader purposes of the International Monetary Fund. On the contrary, such agreements for reciprocal credit can supplement the help given by the Fund and facilitate the functioning of the world economy, particularly during the period of transition. They must not degenerate into bilateral clearing agreements in which settlement of accounts is intended to be made through bilateral adjustment of imports and exports. It should be noted that these currency agreements are predicated on basic commitments on exchange policy through the International Monetary Fund. There should be no objection to the continuance of such agreements within the framework of the Fund.

The one major part of the program for a world economy that remains to be completed is an international agreement on commercial policy. Of necessity, such an agreement has had to await the determination of British policy during the transition. If Britain secures aid in meeting her transition problem, she can enter into an international agreement to reduce tariff barriers and to eliminate quantitative restrictions on trade, except where such restrictions are permitted temporarily under the supervision of an international trade organization. An international agreement on commercial policy is essential to an expansion of world trade and there can be no doubt that a firm understanding on commercial policy will be reached in connection with the aid to Britain.

One aspect of British trade policy, imperial preference, requires

[18] Agreements of this reciprocal credit type have been made with Belgium, Sweden, France, Denmark and Netherlands. The credit limit in the French agreement is £100 million, in the Belgian and Dutch agreements £5 million. The Swedish and Danish agreements do not provide for a stated maximum of credit to be provided for current payments. Financial agreements recently concluded with Finland and Turkey are intended to facilitate settlement of indebtedness as well as payment for current transactions.

special consideration. Such preferential arrangements are of long standing. Britain had them within the British Empire before the Ottawa agreements and the United States has had similar preferential arrangements with Cuba and the Philippines. There is, nevertheless, a tendency to regard trade preferences as a distinctly British policy growing out of the Ottawa Conference of 1932.

While trade preferences are a form of discrimination, they need not be restrictive of trade. If Australia and New Zealand, for example, give substantial *ad valorem* preferences to certain manufactures of Britain, trade may be diverted from lower cost American exporters to higher cost British exporters. The element of discrimination in such an arrangement is of much the same character as that which arises from the extension of a partial free trade area through reciprocal agreement. Of itself, such an arrangement should generally involve an expansion of trade. Preferential trade arrangements may be restrictive, however, if the preferences are given by increasing duties on imports from other countries. Because of their discriminatory character, it would be in the general interest to reduce and gradually to eliminate all preferential arrangements except those involving a true customs union.

VI

Until Britain's balance-of-payments problem in the post-war transition is solved, the objectives of free and orderly exchanges and non-discriminatory international trade cannot be wholly achieved. For Britain may feel compelled to retain wartime exchange controls, restrictions on the convertibility of sterling, and bilateralism and discrimination in international trade, if she cannot find another solution to her problem. A peaceful and prosperous world requires the integration of the United Kingdom and the British Commonwealth in the world economy as soon as possible.

If aid were offered to Britain by the United States and the Dominions on terms within her capacity to meet, the doubt and hesitation in Britain on her international economic policy would probably disappear. Public opinion would overwhelmingly favor British participation in the broad program for international economic coöperation. Her economic and political traditions and interests require Britain to find a solution to her problems within the framework of a world economy. With aid from the United States and the Dominions, such a solution can be found.

A favorable decision on Britain's international economic policy will mark another step forward in the restoration of a world economy. It will contribute significantly to the prompt attainment of those objectives of order and freedom in the international exchanges that the Bretton Woods program has so boldly set up as the basis on which to

build international trade and investment after the war. It will facilitate an international agreement to establish an international trade organization devoted to the maintenance of fair practices in international trade. Only through such an agreement can we hope for a prompt reduction of unnecessary barriers to world trade and the gradual elimination of the discriminatory practices that hamper world trade.

The policy that Britain chooses in meeting her balance-of-payments problem will affect the economic well-being of the entire world. The interest of the United States in the solution of this problem is second only to that of Britain herself. Our foresight in recognizing the importance of facilitating the proper solution will be a test of our economic statesmanship. The aid this country and others offer to Britain will be amply repaid, not alone through the repayment of the debt, but in even greater measure through the broader benefits of a sound and prosperous world economy.

THE THEORY OF ECONOMIC BEHAVIOR[1]

By Leonid Hurwicz*

Had it merely called to our attention the existence and exact nature of certain fundamental gaps in economic theory, the *Theory of Games and Economic Behavior* by von Neumann and Morgenstern would have been a book of outstanding importance. But it does more than that. It is essentially constructive: where existing theory is considered to be inadequate, the authors put in its place a highly novel analytical apparatus designed to cope with the problem.

It would be doing the authors an injustice to say that theirs is a contribution to economics only. The scope of the book is much broader. The techniques applied by the authors in tackling economic problems are of sufficient generality to be valid in political science, sociology, or even military strategy. The applicability to games proper (chess and poker) is obvious from the title. Moreover, the book is of considerable interest from a purely mathematical point of view. This review, however, is in the main confined to the purely economic aspects of the *Theory of Games and Economic Behavior*.

To a considerable extent this review is of an expository[2] nature. This seems justified by the importance of the book, its use of new and unfamiliar concepts and its very length which some may find a serious obstacle.

The existence of the gap which the book attempts to fill has been known to the economic theorists at least since Cournot's work on duopoly, although even now many do not seem to realize its seriousness. There is no adequate solution of the problem of defining "rational economic behavior" on the part of an individual when the very rationality of his actions depends on the probable behavior of other individuals: in the case of oligopoly, other sellers. Cournot and many after him have attempted to sidetrack the difficulty by assuming that every individual has a definite idea as to what others will do under given conditions. Depending on the nature of this expected behavior of other individuals, we have the special, well-known solutions of Bertrand and Cournot, as well as the more general Bowley concept of the

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The tables and figures used in this article were drawn by Mrs. D. Friedlander of the University of Chicago.

[1] *Theory of Games and Economic Behavior*. By John von Neumann and Oskar Morgenstern. (Princeton: Princeton Univ. Press. 1944. Pp. xviii, 625. $10.)

[2] The exposition is mostly carried out by means of comparatively simple numerical examples. This involves loss of generality and rigor, but it may be hoped that it will make the presentation more accessible.

"conjectural variation."[3] Thus, the individual's "rational behavior" is determinate *if* the pattern of behavior of "others" can be assumed *a priori* known. But the behavior of "others" cannot be known *a priori* if the "others," too, are to behave rationally! Thus a logical *impasse* is reached.

The way, or at least *a* way,[4] out of this difficulty had been pointed out by one of the authors[5] over a decade ago. It lies in the rejection of a narrowly interpreted maximization principle as synonymous with rational behavior. Not that maximization (of utility[6] or profits) would not be desirable if it were feasible, but there can be no true maximization when only one of the several factors which decide the outcome (of, say, oligopolistic competition) is controlled by the given individual.

Consider, for instance, a duopolistic situation[7] where each one of the duopolists A and B is *trying* to maximize his profits. A's profits will depend not only on his behavior ("strategy") but on B's strategy as well. Thus, *if* A could control (directly or indirectly) the strategy to be adopted by B, he would select a strategy for himself and one for B so as to maximize his own profits. But he cannot select B's strategy. Therefore, he can in no way make sure that by a proper choice of his own strategy his profits will actually be unconditionally maximized.

It might seem that in such a situation there is no possibility of defining rational behavior on the part of the two duopolists. But it is here that the novel solution proposed by the authors comes in. An example will illustrate this.

Suppose each of the duopolists has three possible strategies at his disposal.[8] Denote the strategies open to duopolist A by A_1, A_2, and A_3, and those open to duopolist B by B_1, B_2, and B_3. The profit made by A, to be denoted by a, obviously is determined by the choices of strategy made by the two duopolists. This dependence will be indicated by subscripts attached to a, with the first subscript referring to A's strategy and the second subscript to that of B; thus, *e.g.*, a_{13} is the profit which will be made by A if he chooses strategy A_1 while B chooses the strategy B_3. Similarly, b_{13} would denote the profits

[3] More recent investigations have led to the idea of a kinked demand curve. This, however, is a special—though very interesting—case of the conjectural variation.

[4] *Cf.* reference to von Stackelberg in footnote 17 and some of the work quoted by von Stackelberg, *op. cit.*

[5] J. von Neumann, "Zur Theorie der Gesellschaftsspiele," *Math. Annalen* (1928).

[6] A side-issue of considerable interest discussed in the *Theory of Games* is that of measurability of the utility function. The authors need measurability in order to be able to set up tables of the type to be presented later in the case where utility rather than profit is being maximized. The proof of measurability is not given; however, an article giving the proof is promised for the near future and it seems advisable to postpone comment until the proof appears. But it should be emphasized that the validity of the core of the *Theory of Games* is by no means dependent on measurability or transferability of the utilities and those who feel strongly on the subject would perhaps do best to substitute "profits" for "utility" in most of the book in order to avoid judging the achievements of the *Theory of Games* from the point of view of an unessential assumption.

[7] It is assumed that the buyers' behavior may be regarded as known.

[8] Actually the number of strategies could be very high, perhaps infinite.

A's Profits

B's choice of strategies / A's choice of strategies	B_1	B_2	B_3
A_1	a_{11}	a_{12}	a_{13}
A_2	a_{21}	a_{22}	a_{23}
A_3	a_{31}	a_{32}	a_{33}

Table 1a

B's Profits

B's choice of strategies / A's choice of strategies	B_1	B_2	B_3
A_1	b_{11}	b_{12}	b_{13}
A_2	b_{21}	b_{22}	b_{23}
A_3	b_{31}	b_{32}	b_{33}

Table 1b

by B under the same circumstances. The possible outcomes of the "duopolistic competition" may be represented in the following two tables:

Table 1a shows the profits A will make depending on his own and B's choice of strategies. The first row corresponds to the choice of A_1, etc.; columns correspond to B's strategies. Table 1b gives analogous information regarding B's profits.

In order to show how A and B will make decisions concerning strategies we shall avail ourselves of a numerical example given in Tables 2a and 2b.

A's Profits

B's choice of strategies / A's choice of strategies	B_1	B_2	B_3
A_1	2	8	1
A_2	4	3	9
A_3	5	6	7

Table 2a

B's Profits

B's choice of strategies / A's choice of strategies	B_1	B_2	B_3
A_1	11	2	20
A_2	9	15	3
A_3	8	7	6

Table 2b

Now let us watch A's thinking processes as he considers his choice of strategy. First of all, he will notice that by choosing strategy A_3 he will be sure that his profits cannot go down below 5, while either of the remaining alternatives would expose him to the danger of going down to 3 or even to 1.

But there is another reason for his choosing A_3. Suppose there is a danger of a "leak": B might learn what A's decision is before he makes his own. Had A chosen, say, A_1, B—if he knew about this—would obviously choose B_3 so as to maximize his own profits; this would leave A with a profit of only 1. Had A chosen A_2, B would respond by selecting B_2, which again would leave A with a profit below 5 which he could be sure of getting if he chose A_3.

One might perhaps argue whether A's choice of A_3 under such circumstances is the only way of defining rational behavior, but it certainly is *a* way of accomplishing this and, as will be seen later, a very fruitful one. The reader will verify without difficulty that similar reasoning on B's part will make him choose B_1 as the optimal strategy. Thus, the outcome of the duopolistic competition is determinate and can be described as follows: A will choose A_3, B will choose B_1, A's profit will be 5, B's 8.

A's Profits

B's choice of strategies / A's choice of strategies	B_1	B_2	B_3
A_1	2	8	1
A_2	4	3	9
A_3	5	6	7

Table 3a

B's Profits

B's choice of strategies / A's choice of strategies	B_1	B_2	B_3
A_1	8	2	9
A_2	6	7	1
A_3	$\boxed{5}$	4	3

Table 3b

An interesting property of this solution is that neither duopolist would be inclined to alter his decision, even if he were able to do so, after he found out what the other man's strategy was.

To see this, suppose B has found out that A's decision was in favor of strategy A_3. Looking at the third row of Table 2b, he will immediately see that in no case could he do better than by choosing B_1, which gives him the highest profit consistent with A's choice of A_3. The solution arrived at is of a very stable nature, independent of finding out the other man's strategy.

But the above example is artificial in several important respects. For one thing, it ignores the possibility of a "collusion" or, to use a more neutral term, coalition between A and B. In our solution, yielding the strategy combination (A_3, B_1), the joint profits of the two duopolists amount to 13; they could do better than that by acting together. By agreeing to choose the strategies A_1 and B_3 respectively, they would bring their joint profits up to 21; this sum could then be so divided that both would be better off than under the previous solution.

A major achievement of the *Theory of Games* is the analysis of the conditions and nature of coalition formation. How that is done will be shown below. But, for the moment, let us eliminate the problem of coalitions by considering a case which is somewhat special but nevertheless of great theoretical interest: the case of *constant sum* profits. An example of such a case is given in Tables 3a and 3b.

Table 3a is identical with Table 2a. But figures in Table 3b have been selected in such a manner that the joint profits of the two duopolists always amount to the same (10), no matter what strategies have been chosen. In such a case, A's gain is B's loss and *vice versa*. Hence, it is intuitively obvious (although the authors take great pains to show it rigorously) that no coalition will be formed.

The solution can again be obtained by reasoning used in the previous case and it will again turn out to be (A_3, B_1) with the respective profits 5 and 5 adding up to 10. What was said above about stability of solution and absence of advantage in finding the opponent[9] out still applies.

There is, however, an element of artificiality in the example chosen that is responsible for the determinateness of the solution. To see this it will suffice to interchange 5 and 6 in Table 3a. The changed situation is portrayed in Table 4 which gives A's profits for different choices of strategies.[10]

A's Profits

B's choice of strategies / A's choice of strategies	B_1	B_2	B_3
A_1	2	8	1
A_2	4	3	9
A_3	6	5	7

Table 4

There is no solution now which would possess the kind of stability found in the earlier example. For suppose A again chooses A_3; then if B should find that out, he would obviously "play" B_2 which gives him the highest possible profit consistent with A_3. But then A_3 would no longer be A's optimum strategy: he could do much better by choosing A_1; but if he does so, B's optimum strategy is B_3, not B_2, etc. There is no solution which would not give at least one of the opponents an incentive to change his decision if he found the other man out! There is no stability.[11]

What is it in the construction of the table that insured determinateness in

[9] In this case the interests of the two duopolists are diametrically opposed and the term "opponents" is fully justified; in the previous example it would not have been.

[10] The table for B's profits is omitted because of the constant sum assumption. Clearly, in the constant sum case, B may be regarded as minimizing A's profits since this implies maximization of his own.

[11] There is, however, a certain amount of determinateness, at least in the negative sense, since certain strategy combinations are excluded: *e.g.* (A_3, B_1); A would never choose A_3 if he knew B had chosen B_1, and *vice versa*.

the case of Table 3 and made it impossible in Table 4? The answer is that Table 3 has a *saddle point* ("minimax") while Table 4 does not.

The saddle point has the following two properties: it is the highest of all the row minima and at the same time it is lowest of the column maxima. Thus, in Table 3a the row minima are respectively 1, 3, and 5, the last one being highest among them (*Maximum Minimorum*); on the other hand, the column maxima are respectively 5, 8, and 9 with 5 as the lowest (*Minimum Maximorum*). Hence the combination (A_3, B_1) yields both the highest row minimum and the lowest column maximum, and, therefore, constitutes a saddle point. It is easy to see that Table 4 does *not* possess a saddle point. Here 5 is still the *Maximum Minimorum*, but the *Minimum Maximorum* is given by 6; the two do not coincide, and it is the absence of the saddle point that makes for indeterminateness in Table 4.

Why is the existence of a unique saddle point necessary (as well as sufficient) to insure the determinateness of the solution? The answer is inherent in the reasoning used in connection with the earlier examples: if A chooses his strategy so as to be protected in case of any leakage of information concerning his decision, he will choose the strategy whose row in the table has the highest minimum value, *i.e.*, the row corresponding to the *Maximum Minimorum*—A_3 in case of Table 4—for then he is sure he will not get less than 5, even if B should learn of this decision. B, following the same principle, will choose the column (*i.e.*, strategy) corresponding to the *Minimum Maximorum*—B_1 in Table 4—thus making sure he will get at least 4, even if the information does leak out.

In this fashion both duopolists are sure of a certain minimum of profit—5 and 4, respectively. But this adds up to only 9. The residual—1—is still to be allocated and this allocation depends on outguessing the opponent. It is this residual that provides an explanation, as well as a measure, of the extent of indeterminacy. Its presence will not surprise economists familiar with this type of phenomenon from the theory of bilateral monopoly. But there are cases when this residual does equal zero, that is, when the *Minimum Maximorum* equals the *Maximum Minimorum*, which (by definition) implies the existence of the saddle point and complete determinacy.

At this stage the authors of the *Theory of Games* had to make a choice. They could have accepted the fact that saddle points do not always exist so that a certain amount of indeterminacy would, in general, be present. They preferred, however, to get rid of the indeterminacy by a highly ingenious modification of the process which leads to the choice of appropriate strategy.

So far our picture of the duopolist making a decision on strategy was that of a man reasoning out which of the several possible courses of action is most favorable (*"pure strategy"*). We now change this picture and put in his hands a set of dice which he will throw to determine the strategy to be chosen. Thus, an element of chance is introduced into decision making ("mixed strategy").[12] But not everything is left to chance. The duopolist A

[12] The authors' justification for introducing "mixed strategies" is that leaving one's decision to chance is an effective way of preventing "leakage" of information since the individual making the decision does not himself know which strategy he will choose.

A's Profits

B's choice of strategies / A's choice of strategies	B_1	B_2	ROW MINIMA
A_1	5	3	3
A_2	1	5	1
COLUMN MAXIMA	5	5	

MAXIMUM MINIMORUM

MINIMUM MAXIMORUM

Table 5

must in advance formulate a rule as to what results of the throw—assume that just one die is thrown—would make him choose a given strategy. In order to illustrate this we shall use a table that is somewhat simpler, even if less interesting than those used previously. In this new table (Table 5)[18] each duopolist has only two strategies at his disposal.

An example of a rule A might adopt would be:

> If the result of the throw is 1 or 2, choose A_1;
> if the result of the throw is 3, 4, 5, or 6, choose A_2.

If this rule were followed, the probability that A will choose A_1 is 1/3, that of his choosing A_2 is 2/3. If a different rule had been decided upon (say, one of choosing A_1 whenever the result of the throw is 1, 2, or 3), the probability of choosing A_1 would have been 1/2. Let us call the fraction giving the

[18] In Table 5 there is no saddle point.

probability of choosing A_1 A's *chance coefficient;* in the two examples, A's chance coefficients were 1/3 and 1/2 respectively.[14]

As a special case the value of the chance coefficient might be zero (meaning, that is, definitely choosing strategy A_2) or one (meaning that A is definitely choosing strategy A_1); thus in a sense "pure strategies" may be regarded as

Mathematical Expectations of A's Profits

B's chance coefficients / A's chance coefficients	0	$\frac{1}{3}$	$\frac{2}{3}$	1	ROW MINIMA	
0	5	$3\frac{2}{3}$	$2\frac{1}{3}$	1	1	
$\frac{1}{3}$	$4\frac{1}{3}$	$3\frac{2}{3}$	3	$2\frac{1}{3}$	$2\frac{1}{3}$	
$\frac{2}{3}$	$3\frac{2}{3}$	$3\frac{2}{3}$	$3\frac{2}{3}$	$3\frac{2}{3}$	$3\frac{2}{3}$	MAXIMUM MINIMORUM
1	3	$3\frac{2}{3}$	$4\frac{1}{3}$	5	3	
COLUMN MAXIMA	5	$3\frac{2}{3}$	$4\frac{1}{3}$	5		
		MINIMUM MAXIMORUM				

Table 6

a special case of mixed strategies. However, this last statement is subject to rather important qualifications which are of a complex nature and will not be given here.

Now instead of choosing one of the available strategies the duopolist A must choose the optimal (in a sense not yet defined) chance coefficient. How

[14] Since the probability of choosing A_2 is always equal to one minus that of choosing A_1, specification of the probability of choosing A_1 is sufficient to describe a given rule. However, when the number of available strategies exceeds two, there are several such chance coefficients to be specified.

is the choice of the chance coefficient made? The answer lies in constructing a table which differs in two important respects from those used earlier. Table 6 provides an example. Each row in the table now corresponds to a possible value of A's chance coefficient; similarly, columns correspond to possible values of B's chance coefficient. Since the chance coefficient may assume any value between zero and one (including the latter two values), the table is to be regarded merely as a "sample." This is indicated by spaces between rows and between columns.

The numbers entered in the table are the average values (mathematical expectations) corresponding to the choice of chance coefficients indicated by the row and column.[15] (One should mention that Table 6 is only an expository device: the actual procedures used in the book are algebraic and much simpler computationally.)

If we now assume with the authors that each duopolist is trying to maximize the mathematical expectation of his profits (Table 6) rather than the profits themselves (Table 5), it might seem that the original source of difficulty remains if a saddle point does not happen to exist. But the mixed strategies were not introduced in vain! It is shown (the theorem was originally proved by von Neumann in 1928) that in the table of mathematical expectations (like Table 6) a saddle point *must* exist; the problem is always determinate.[16]

The reader who may have viewed the introduction of dice into the decision-making process wth a certain amount of suspicion will probably agree that

[15] To see this we shall show how, *e.g.*, we have obtained the value in the second row and third column of Table 5 (*viz.*, 3).

We construct an auxiliary table (valid only for this particular combination of chance coefficients (A's 1/3, B's 2/3).

This table differs from Table 5 only by the omission of row maxima and column minima and by the insertion of the probabilities of choosing the available strategies corresponding to the second row third column of Table 6. The computation of the mathematical expectation is indicated in Table 6.

COMPUTATION OF THE MATHEMATICAL EXPECTATION FOR THE 2ND ROW, 3RD COLUMN IN TABLE 6

A's choice of strategies	B's choice of strategies	B_1	B_2
	B's chance coefficients / A's chance coefficients	$\frac{2}{3}$	$\frac{1}{3}$
A_1	$\frac{1}{3}$	5	3
A_2	$\frac{2}{3}$	1	5

$$\tfrac{1}{3} \times \tfrac{2}{3} \times 5 + \tfrac{1}{3} \times \tfrac{1}{3} \times 3 + \tfrac{2}{3} \times \tfrac{2}{3} \times 1 + \tfrac{2}{3} \times \tfrac{1}{3} \times 5 = \tfrac{27}{9} = 3$$

[16] In Table 6 the saddle point is in the third row second column; it is to be stressed that Table 5 has no saddle point.

this is a rather spectacular result. Contrary to the initial impression, it *is* possible to render the problem determinate. But there is a price to be paid: acceptance of mixed strategies, assumption that only the mathematical expectation of profit (not its variance, for instance) matters, seem to be necessary. Many an economist will consider the price too high. Moreover, one might question the need for introducing determinateness into a problem of this nature. Perhaps we should consider as the "solution" the interval of indeterminacy given by the two critical points: the *Minimum Maximorum* and *Maximum Minimorum*.

As indicated earlier in this review, one should not ignore, in general, the possibility of a collusion. This is especially evident when more complex economic situations are considered.

We might, for instance, have a situation where there are two sellers facing two buyers. Here a "coalition" of buyers, as well as one of sellers, may be formed. But it is also conceivable that a buyer would bribe a seller into some sort of coöperation against the other two participants. Several other combinations of this type can easily be found.

When only *two* persons enter the picture, as in the case of duopoly (where the rôle of buyers was ignored), it was seen that a coalition would not be formed if the sum of the two persons' profits remained constant. But when the number of participants is *three* or more, subcoalitions can profitably be formed even if the sum of all participants' profits is constant; in the above four-person example it might pay the sellers to combine against the buyers even if (or, perhaps, especially if) the profits of all four always add to the same amount.

Hence, the formation of coalitions may be adequately treated without abandoning the highly convenient constant-sum assumption. In fact, when the sum is known to be non-constant, it is possible to introduce (conceptually) an additional fictitious participant who, by definition, loses what all the real participants gain and *vice versa*. In this fashion a non-constant sum situation involving, say, three persons may be considered as a special case of a constant-sum four-person situation. This is an additional justification for confining most of the discussion (both in the book and in the review) to the constant-sum case despite the fact that economic problems are as a rule of the non-constant sum variety.

We shall now proceed to study the simplest constant-sum case which admits coalition formation, that involving three participants. The technique of analysis presented earlier in the two-person case is no longer adequate. The number of possibilities increases rapidly. Each of the participants may be acting independently; or else, one of the three possible two-person coalitions (A and B *vs.* C, A and C *vs.* B, B and C *vs.* A) may be formed. Were it not for the constant-sum restriction, there would be the additional possibility of the coalition comprising all three participants.

Here again we realize the novel character of the authors' approach to the problem. In most[17] of traditional economic theory the formation—or absence—

[17] In his *Grundlagen einer reinen Kostentheorie* (Vienna, 1932) H. von Stackelberg does point out (p. 89) that "the competitors [duopolists] must somehow unite; they must . . .

of specific coalitions is ***postulated.*** Thus, for instance, we discuss the economics of a cartel without rigorously investigating the necessary and sufficient conditions for its formation. Moreover, we tend to exclude *a priori* such phenomena as collusion between buyers and sellers even if these phenomena are known to occur in practice. The *Theory of Games,* though seemingly more abstract than economic theory known to us, approaches reality much more closely on points of this nature. A complete solution to the problems of economic theory requires an answer to the question of coalition formation, bribery, collusion, etc. This answer is now provided, even though it is of a somewhat formal nature in the more complex cases; and even though it does not always give sufficient insight into the actual workings of the market.

Let us now return to the case of three participants. Suppose two of them are sellers, one a buyer. Traditional theory would tell us the quantity sold by each seller and the price. But we know that in the process of bargaining one of the sellers might bribe the other one into staying out of the competition. Hence the seller who refrained from market operations would make a profit; on the other hand, the nominal profit made by the man who did make the sale would exceed (by the amount of bribe) the actual gain made.

It is convenient, therefore, to introduce the concept of ***gain:*** the bribed man's gain is the amount of the bribe, the seller's gain is the profit made on a sale minus the bribe, etc. A given distribution of gains among the participants is called an ***imputation.*** The imputation is not a number: it is a set of numbers. For instance, if the gains of the participants in a given situation were g_A, g_B, g_C, it is the set of these three g's that is called the imputation. The imputation summarizes the outcome of the economic process. In any given situation there are a great many possible imputations. Therefore, one of the chief objectives of economic theory is that of finding those among all the possible imputations which will actually be observed under rational behavior.

In a situation such as that described (three participants, constant-sum) each man will start by asking himself how much he could get acting independently, even if the worst should happen and the other two formed a coalition against him. He can determine this by treating the situation as a two-person case (the opposing coalition regarded as one person) and finding the relevant *Maximum Minimorum*, or the saddle point, if that point does exist; the saddle point would, of course, exist if "mixed strategies" are used. Next, the participant will consider the possibility of forming a coalition with one of the other two men. Now comes the crucial question: under what conditions might such a coalition be formed?

Before discussing this in detail, let us summarize, in Table 8, all the relevant information.

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supplement the economic mechanics, which in this case is inadequate, by economic politics." But no rigorous theory is developed for such situations (although an outline of possible developments is given). This is where the *Theory of Games* has made real progress.

TABLE 8

I. If A acts alone, he can get	5
If B acts alone, he can get	7
If C acts alone, he can get	10.
II. If A and B form a coalition, they can get	15
If A and C form a coalition, they can get	18
If B and C form a coalition, they can get	20.
III. If A, B, and C act together, they can get	25.

Among the many possible imputations, let us now consider the three given in Table 9.

TABLE 9

	A	B	C
#1	6.5	8.3	10.2
#2	5.0	9.5	10.5
#3	4.0	10.0	11.0

It will be noted that under imputation #1, B and C are each better off than if they had been acting individually: they get respectively 8.3 and 10.2 instead of 7 and 10. Hence, there is an incentive for B and C to form a coalition since without such a coalition imputation #1 would not be possible. But once the coalition is formed, they can do better than under #1; *viz.*, under #2, where each gets more (9.5 and 10.5 instead of 8.3 and 10.2, respectively). In such a case we say that imputation #2 *dominates* imputation #1. It might seem that #3, in turn, dominates #2 since it promises still more to both B and C. But it promises too much: the sum of B's and C's gains under #3 is 21, which is more than their coalition could get (*cf.* Table 8)! Thus #3 is ruled out as unrealistic and cannot be said to dominate any other imputation.

Domination is an exceptionally interesting type of relation. For one thing, it is not transitive: we may have an imputation i_1 dominating the imputation i_2 and i_2 dominating i_3, without thereby implying that i_1 dominates i_3; in fact, i_1 might be dominated by i_3.[18] Moreover, it is easy to construct examples of, say, two imputations, neither of which dominates the other one.[19]

To get a geometric picture of this somewhat unusual situation one may turn

[18] *I.e.*, domination may be a *cyclic* relation. For instance, consider the following three imputations in the above problem: #1 and #2 as in Table 9, and #4, where

	A	B	C
#4	6.0	7.0	12.0.

Here #2 (as shown before) dominates #1 (for the coalition B, C), #4 dominates #2 (for coalition A, C), but at the same time #1 dominates #4 (for the coalition A, B): the cycle is completed.

[19] For instance, #2 and #3 in Table 9.

to Figure 1, where points on the circle represent different possible imputations. (The reader must be cautioned that this is merely a geometrical analogy, though a helpful one.) Let us now say that point #1 dominates point #2 if #2 is less than 90° (clockwise) from #1. It is easy to see in Figure 1 that #1 dominates #2 and #2 dominates #3, but in spite of that, #1 does not dominate #3.

This geometrical picture will help define the very fundamental concept of a *solution*.

Consider the points (imputations) #1, 3, 5, and 7 in Figure 1. None of them dominates any other since any two are either *exactly* or more than 90° apart. But any other point on the circle is dominated by at least (in this case: exactly) one of them: all points between #1 and #3 are dominated by #1, etc. There is no point on the circle which is not dominated by one of the above four points. Now we *define* a solution as a set of points (imputations) with two properties: (1) no element of the set dominates any other element of the set, and (2) any point outside the set must be dominated by at least one element within the set.

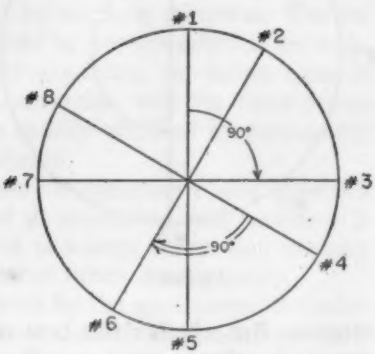


FIGURE 1

We have seen that the points #1, 3, 5, 7 do have both of these properties; hence, the four points together form a solution. It is important to see that none of the individual points by itself can be regarded as a solution. In fact, if we tried to leave out any one of the four points of the set, the remaining three would no longer form a solution; for instance, if #1 were left out, the points between #1 and #3 are not dominated by any of the points #3, 5, 7. This violates the second property required of a solution and the three points by themselves are not a solution. On the other hand, if a fifth point were added to #1, 3, 5, 7, the resulting five element set would not form a solution either; suppose #2 is the fifth point chosen; we note that #2 is dominated by #1 and it also dominates #3. Thus, the first property of a solution is absent.

Contrary to what would be one's intuitive guess, an element of the solution may be dominated by points outside the solution: #1 is dominated by #8, etc.

There can easily be more than one solution. The reader should have no trouble verifying the fact that #2, 4, 6, 8 also form a solution, and it is clear that infinitely many other solutions exist.

Does there always exist at least one solution? So far this question remains unanswered. Among the cases examined by the authors none has been found without at least one solution. But it has not yet been proved that there must always be a solution. To see the theoretical possibility of a case without a

solution we shall redefine slightly our concept of domination (*cf.* Figure 2): #1 dominates #2 if the angle between them (measured clockwise) does not exceed 180°.

Hence, in Figure 2 point #1 dominates #3, but not #4, etc. It can now be shown that in this case *no* solution exists. For suppose there is one; then we may, without loss of generality, choose #1 as one of its points. Clearly, #1 by itself does not constitute a solution, for there are points on the circle (*e.g.*, #4) not dominated by #1; thus the solution must have at least two points. But any other point on the circle either is dominated by #1 (*e.g.*, #2), or it dominates #1 (*e.g.*, #4), or both (#3), which contradicts the first requirement for the elements of a solution. Hence there is no solution consisting of two points either. *A fortiori*, there are no solutions containing more than two points. Hence we have been able to construct an example without a solution. But whether this type of situation could arise in economics (or in games, for that matter) is still an open question.

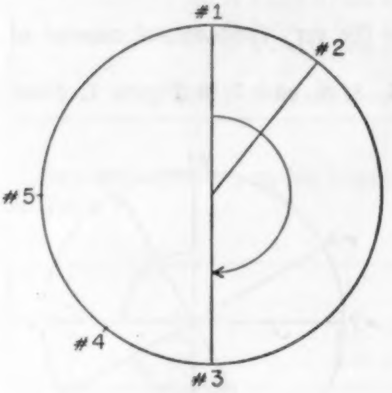


FIGURE 2

Now for the economic interpretation of the concept of solution. Within the solution there is no reason for switching from one imputation to another since they do not dominate each other. Moreover, there is never a good reason for going outside a given solution: any imputation outside the solution can be "discredited" by an imputation within the solution which dominates the one outside. But, as we have seen, the reverse is also usually true: imputations within the solution may be dominated by those outside. If we are to assume that the latter consideration is ignored, the given solution acquires an institutional, if not accidental, character. According to the authors, a solution may be equivalent to what one would call the "standards of behavior" which are accepted by a given community.

The multiplicity of solutions can then be considered as corresponding to alternative institutional setups; for a given institutional framework only one solution would be relevant. But even then a large number of possibilities remains since, in general, a solution contains more than one imputation. More indeterminacy yet would be present if we had refrained from introducing mixed strategies.

It would be surprising, therefore, if in their applications von Neumann and Morganstern should get no more than the classical results without discovering imputations hitherto neglected or ignored. And there are some rather interesting "unorthodox" results pointed out, especially in the last chapter of the book.

In one case, at least, the authors' claim to generality exceeding that of

economic theory is not altogether justified in view of the more recent literature. That is the case of what essentially corresponds to bilateral monopoly (p. 564, proposition 61:C). The authors obtain (by using their newly developed methods) a certain interval of indeterminacy for the price; this interval is wider than that indicated by Böhm-Bawerk, because (as the authors themselves point out) of the dropping of Böhm-Bawerk's assumption of a unique price. But this assumption has been abandoned, to give only one example, in the theories of consumer's surplus, with analogous extension of the price interval.

It will stand repeating, however, that the *Theory of Games* does offer a greater generality of approach than could be attained otherwise. The existence of "discriminatory" solutions, discovered by purely analytical methods, is an instance of this. Also, the possibility of accounting for various types of deals and collusions mentioned earlier in connection with the three-person and four-person cases go far beyond results usually obtained by customarily used methods and techniques of economic theory.

The potentialities of von Neumann's and Morgenstern's new approach seem tremendous and may, one hopes, lead to revamping, and enriching in realism, a good deal of economic theory. But to a large extent they are only potentialities: results are still largely a matter of future developments.

The difficulties encountered in handling, even by the more powerful mathematical methods, the situations involving more than three persons are quite formidable. Even the problems of monopoly and monopsony are beyond reach at the present stage of investigation. The same is true of perfect competition, though it may turn out that the latter is not a "legitimate" solution since it excludes the formation of coalitions which may dominate the competitive imputations. A good deal of light has been thrown on the problem of oligopoly, but there again the results are far from the degree of concreteness desired by the economic theorist.

The reviewer therefore regards as somewhat regrettable some of the statements made in the initial chapter of the book attacking (rather indiscriminately) the analytical techniques at present used by the economic theorists. True enough, the deficiencies of economic theory pointed out in the *Theory of Games* are very real; nothing would be more welcome than a model giving the general properties of a system with, say, m sellers and n buyers, so that monopoly, duopoly, or perfect competition could simply be treated as special cases of the general analysis. Unfortunately, however, such a model is not yet in sight. In its absence less satisfactory, but still highly useful, models have been and no doubt will continue to be used by economic theorists. One can hardly afford to ignore the social need for the results of economic theory even if the best is rather crude. The fact that the theory of economic fluctuations has been studied as much as it has is not a proof of "how much the attendant difficulties have been underestimated" (p. 5). Rather it shows that economics cannot afford the luxury of developing in the theoretically most "logical" manner when the need for the results is as strong as it happens to be in the case of the ups and downs of the employment level!

Nor is it quite certain, though of course conceivable, that, when a rigorous

theory developed along the lines suggested by von Neumann and Morgenstern is available, the results obtained in the important problems will be sufficiently remote from those obtained with the help of the current (admittedly imperfect) tools to justify some of the harsher accusations to be found in the opening chapter of the book. It must not be forgotten, for instance, that, while theoretical derivation of coalitions to be formed is of great value, we do have empirical knowledge which can be used as a substitute (again imperfect) for theory. For example, cartel formation may be so clearly "in the cards" in a given situation that the economic theorist will simply include it as one of his assumptions while von Neumann and Morgenstern would (at least in principle) be able to *prove* the formation of the cartel without making it an additional (and logically unnecessary) assumption.

The authors criticize applications of the mathematical methods to economics in a way which might almost, in spite of protests to the contrary, mislead some readers into thinking that von Neumann and Morgenstern are not aware of the amount of recent progress in many fields of economic theory due largely to the use of mathematical tools. They also seem to ignore the fact that economics developed in literary form is, implicitly, based on the mathematical techniques which the authors criticize. (Thus it is not the methods of mathematical economics they are really questioning, but rather those elements of economic theory which literary and mathematical economics have in common.) While it is true that even mathematical treatment is not always sufficiently rigorous, it is as a rule more so than the corresponding literary form, even though the latter is not infrequently more realistic in important respects.

There is little doubt in the reviewer's mind that nothing could have been further from the authors' intentions than to give aid and comfort to the opponents of rigorous thinking in economics or to increase their complacency. Yet such may be the effect of some of the vague criticisms contained in the first chapter; they hardly seem worthy of the constructive achievements of the rest of the book.

Economists will probably be surprised to find so few references to more recent economic writings. One might almost form the impression that economics is synonymous with Böhm-Bawerk plus Pareto. Neither the nineteenth century pioneers (such as Cournot) nor the writers of the last few decades (Chamberlin, Joan Robinson, Frisch, Stackelberg) are even alluded to. But, perhaps, the authors are entitled to claim exemption from the task of relating their work to that of their predecessors by virtue of the tremendous amount of constructive effort they put into their opus. One cannot but admire the audacity of vision, the perseverance in details, and the depth of thought displayed on almost every page of the book.

The exposition is remarkably lucid and fascinating, no matter how involved the argument happens to be. The authors made an effort to avoid the assumption that the reader is familiar with any but the more elementary parts of mathematics; more refined tools are forged "on the spot" whenever needed.

One should also mention, though this transcends the scope of the review, that in the realm of strategic games proper (chess, poker) the results obtained are more specific than some of the economic applications. Those interested in the nature of determinacy of chess, in the theory of "bluffing" in poker, or in the proper strategy for Sherlock Holmes in his famous encounter with Professor Moriarty, will enjoy reading the sections of the book which have no direct bearing on economics. The reader's views on optimum military or diplomatic strategies are also likely to be affected.

Thus, the reading of the book is a treat as well as a stage in one's intellectual development. The great majority of economists should be able to go through the book even if the going is slow at times; it is well worth the effort. The appearance of a book of the caliber of the *Theory of Games* is indeed a rare event.

COMMUNICATIONS

Hansen's "Three Methods of Expansion Through Fiscal Policy": Comment

In the June, 1945, number of this *Review* (pp. 382-87), Professor Hansen gives an interesting diagrammatic exposition of the three basic ways in which fiscal policy can expand total income. The immediate occasion of this comment is to raise queries as to the precise meaning of the diagrams, and to suggest corrections for what seem to be certain non-essential errors, particularly in Figure 3 (p. 385).

Hansen's purpose is to show the increase in income resulting from the three fiscal policies, starting in each case from the same budget-balancing equilibrium. In Figures 1 and 2, it seems clear that the diagrams show a continuous series of larger and larger incomes at which the economy would be in equilibrium, given larger and larger doses of the fiscal stimulant (deficit-spending in one case and tax-financed spending in the other). There is some hint in the text that Hansen may have in mind not a continuous series, but only the initial and terminal points, in which case the lines connecting these points would lose significance, and in particular there would be no reason for the curvature of some of these lines in Figure 2. Incidentally, should not the broken lines in Figure 2 start from points *H* and *F?* Otherwise, the diagram shows income at equilibrium at the initial level *E,* both with and without a small dose of the fiscal stimulant.

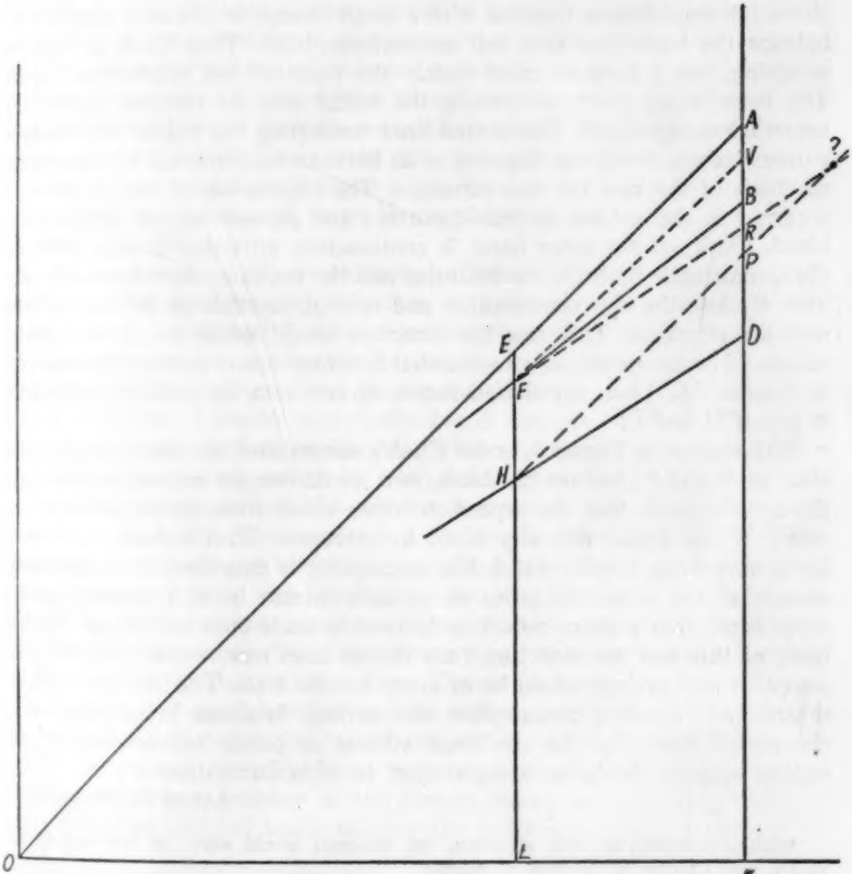
But the real question arises with respect to Figure 3 (tax-reduction with no change in public expenditures), which does not appear consistent with either of the above interpretations. The simplest adjustment would be to redraw the broken lines so that they would start from points *H* and *F.* Then they would show tax receipts starting at the original level and tapering off to the final reduced amount *PR;* and then tax-financed spending plus deficit-spending would be shown as a constant amount, in accord with Hansen's assumption. (This the present diagram does not do.)

This constant outlay would be represented by the constant distance between the line *FV* and the suggested line *HP.*

Having started to comment, one is tempted to go on and, in particular, to express a caution as to the inference often drawn: that *any desired* income can be induced by any one of these methods. This amounts to saying that, in existing or predictable situations, we do not need or desire to increase the national income by more than these mechanisms are capable of. In the case of increased public spending without increased tax-rates, both the source of the stimulating effect and the possible offsetting reactions have been amply dis-

cussed and should be well understood. In the case of increased tax-financed expenditure, the stimulative effect hinges on the increased taxes reducing savings more than they reduce investment; and it seems clearly likely that a point could be reached beyond which they would not have this effect.

In the case of reducing taxes while keeping public outlays constant, the stimulus hinges on the reduced tax-rates stimulating consumption, while private investment is not reduced, or not as much as consumption is increased. The obvious limit comes when taxes go to zero. (In the diagram, they are reduced about 80 per cent.) If consumption should fail to respond as vigorously as the diagram shows, the no-tax limit might be reached before income expanded to the level *OK*, which appropriately symbolizes a satisfactory income. It is interesting to note that consumption is shown not only as increasing more than tax receipts are reduced, but as exceeding its former normal relation to total income by more than the reduction in tax receipts. Professor Hansen is clearly assuming that the increased consumption (which



is the one active component in this case) has a multiplier effect, and he is relying on that effect for his quantitative results. This seems, in principle, justifiable. This is aside from the question whether the size of the multipliers implicit in the several diagrams is overly liberal.

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Comment

The curves could be drawn either in the manner of my article in the June number or in the manner of Professor Clark's suggestion. Either method is correct, according to the fundamental assumptions made.

Clark assumes (Figure 2) a continuous adjustment both of expenditures and of tax *rates*. Thus his curves rightly would start from points *H* and *F*. I, on the other hand, assumed an increase in expenditures adequate to bring about full employment together with a single change in tax rates adequate to balance the budget at that full employment level. Thus Clark is right in assuming that I have in mind mainly the terminal full employment point. The lines in my chart, connecting the initial and the terminal points, are nevertheless significant. The dotted lines connecting the points indicate how various income levels are disposed of as between consumption and saving on the basis of the new tax rate structure. The income would vary as changes occurred in the volume of public outlays and private capital outlays combined. Clark, on the other hand, is continuously adjusting at each point on the income scale both the expenditures and the tax rates. In other words, my lines disclose the new consumption and savings function on the basis of the new tax structure. This new tax structure would mean a somewhat lower volume of consumption, also a somewhat lower volume of savings, for example, at income *OL*. Thus, my dotted curves do not coincide with the solid lines at points *H* and *F*.

With respect to Figure 3, under Clark's assumption, the new dotted curves start at *H* and *F;* but on this basis, how would one get any expansion, since the assumption is that the expansion comes about from the reduction in tax rates? If this initial difficulty could be overcome, Clark's chart, in view of his assumptions, is quite valid. His assumption is that there is a continuous process of tax reduction going on at each income level. I assume, on the other hand, that a sharp reduction in rates is made once and for all. On the basis of this new tax structure,[1] my dotted lines now reveal what the consumption and savings would be at every income level. The income would be determined (the new consumption and savings functions being given as in the dotted lines) by the combined volume of public outlays and private capital outlays, the latter being subject to wide fluctuations.

ALVIN H. HANSEN*

[1] With a constant tax *rate* structure, tax *revenues* would vary, as indicated in my charts, with changes in the level of income.

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Professor Hayek on German Socialism

I

In Chapter XII of his recent book, *The Road to Serfdom*,[1] Professor Hayek undertakes to show that the political philosophy of German national socialism has its roots in the teachings and doctrines of German socialists. Professor Hayek claims that "the support which brought these [national socialist] ideas to power, came precisely from the socialist camp," that, at least in Germany, "the connection between nationalism and socialism was close from the beginning," and that "it was largely with the assistance of old socialists that the beginning which produced national socialism rose during this period."[2] This paper will examine the correctness of these statements in view of the political and economic ideology of German socialism.

Professor Hayek bases his argument on two types of evidence. First, he reminds us that pre-1914 German socialism counted among its forbears the same men—Fichte, Rodbertus, and Lassalle—who are at present recognized as the intellectual fathers of national socialism. Second, he quotes several authors whose ideas he claims were formed by their study of Marxian writings and who expressed strongly nationalistic views. These two facts he considers sufficient evidence to convict the German socialist movement of adherence to extreme nationalism, to a glorification of state power at the expense of the individual, and to an ideology diametrically opposed to that of traditional liberalism.

A proper analysis of the economic and political ideology of any group consists in tracing the historical influences operative on the representative exponents of the group and in fully discussing their views. With the exception of Bebel, none of the men referred to by Professor Hayek can be regarded as having held leading positions among socialist writers or politicians. The appeal to Fichte, Lassalle, and Rodbertus is also deceptive. The fact that these men are regarded as intellectual forbears of socialism and of national socialism does not mean much by itself unless a thorough analysis is made of why they have attained this position and which parts of their theories have been taken over. How misleading the simple appeal to spiritual fatherhood can be is shown by reference to contemporary America, where we find such diverse groups as the Republicans and the Communists appealing to Lincoln as their political ancestor; where we find monopolists calling on Jefferson to protect their "freedom of enterprise" from the trust-busters who claim to act on principles of that same Thomas Jefferson.

Before we can clearly understand the influence of Fichte, Lassalle, and Rodbertus on both the socialists and national socialists, we must investigate briefly the part of their doctrines that has been adopted by each group. Fichte started as an admirer of the French Revolution and in his younger years published political tracts abusing the feudalistic and absolutist trends

[1] Univ. of Chicago Press, Chicago, 1944.

[2] *Ibid.*, pp. 168-69.

in many German principalities. Economically Fichte was a mercantilist; politically he became, under the impact of the Napoleonic wars and the eloquent manifestation of the weakness of a divided Germany, more and more of a nationalist, without, however, losing himself in purely chauvinist arguments. Later socialists became acquainted with some of Fichte's works chiefly through Lassalle who considered him an important political philosopher. It would be wrong, however, to claim that he was regarded by anyone as a father of socialism; certainly his influence was much less than even that of Hegel. It is true that the socialists noted with satisfaction the occasional anti-feudalistic, anti-clerical, or egalitarian ideas in Fichte, but they did the same with the Greek philosophers, the medieval and humanist utopians, and the religious reformers. It would be almost equally preposterous to regard Plato, Thomas More, Jan Hus, Thomas Campanella, or Winstanley as fathers of German socialism.[3]

The case of Lassalle and Rodbertus is somewhat different from that of Fichte. Their doctrines were adopted more fully by the socialists than those of Fichte, but only in a very limited sense can they be regarded as fathers of national socialism. (It would be especially strange if the national socialists so regarded Lassalle, who was of Jewish parentage.) The original national socialist writers were not acquainted with either Lassalle or Rodbertus. Their names do not even appear in the writings of Rudolf Jung, Count E. v. Reventlow, and Gottfried Feder. It is likely that Lassalle and Rodbertus were not introduced in the national socialist literature until 1934 by Sombart in his *Deutscher Sozialismus*. After that, occasional references to Rodbertus and Lassalle appear, but I have been unable to locate a single source which treated their views with genuine understanding.[4]

Lassalle and Rodbertus developed similar political philosophies, both assigning to the state an economic rôle. Their views were based on the Hegelian *Rechtsphilosophie*, but whereas Marx, who also derived his philosophical inspiration from Hegel, "turned the Hegelian philosophy upside down," Lassalle and Rodbertus followed Hegel in maintaining that the state is a moral category (*sittliche Idee*) standing above the individual. But whereas for Hegel this moral category was absolute (*i.e.*, objectively fixed) and the individual completely subordinated to the state and its purpose, Lassalle and Rodbertus assigned to the state a purpose derived from the individuals composing it. The purpose of the state according to them is to bring about the greatest freedom of the individual, which it achieves by being a welfare state, a "*sozialer Staat*."[5] This view is most clearly expressed by Lassalle in

[3] In the latter part of the nineteenth century it became fashionable among German socialists to look for egalitarian ideas among the old philosophers and reformers. The two outstanding examples of this literature are found in Karl Kautsky, *Die Vorläufer des neueren Sozialismus* (Stuttgart, 1895), and Georg Adler, *Geschichte des Sozialismus und Kommunismus von Plato zur Gegenwart* (Leipzig, 1899).

[4] The fullest discussion of Rodbertus and Lassalle in national socialist literature is to be found in Friedrich Schinkel, *Preussischer Sozialismus* (Breslau, 1934), which shows little understanding of the economic or political theories of either of the two men.

[5] The chief exponent of Lassalle's "state" or "national" socialism was Berhard Harms

the statement that "the purpose of the state is to bring the individual to his positive development and progressive growth, in other words, to create the true foundation of human destiny, *i.e.*, of the culture of which the human race is capable; it is the *means for the education and development of humanity to freedom*."[6]

Nevertheless, it is significant that in the later history of German socialism the Marxian doctrine of opposition to the state prevailed over Lassalle's aim to remake bourgeois Germany into a welfare state. The reason for this is to be found not only in the more compact logical theory of Marxism, but also in the fact that the German socialist movement carried forward the rationalist democratic ideals adapted from the French Revolution.[7] These ideas had slowly filtered into Germany until they had provided the impetus for the revolution of 1848. This revolution for a liberal bourgeois democracy was hailed by the socialists as their work, and later they always identified their political aims and ideals with a considerable part of those held by the 1848 revolutionaries. Professor Hayek has thus to admit that after 1870 "the national socialist elements receded for a time into the background."[8] This is rather an understatement since the national elements were completely absent among the socialists, even among those who, following Eduard Bernstein, had given up the theory of the social revolution. In this period falls the great struggle of the German socialists with the German state. It is impossible here to mention all the incidents between the socialist party and the guardians of the idea of a strong nationalist state—in the *Reichstag*, in the press, and in scientific literature. It must suffice to mention just a few examples. The socialists voted and agitated consistently against government monopolies: for instance, in 1874-76 against the state ownership of the railroads and in 1882 against Bismarck's tobacco monopoly. In 1892 there took place in socialist circles a debate on state socialism. The issue was discussed at the party conference of 1892 at Berlin and a resolution condemning state socialism was passed by a unanimous vote. The argument was summarized by Wilhelm Liebknecht, one of the leading socialist deputies: "The nearer capi-

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in his *Ferdinand Lassalle und seine Bedeutung für die deutsche Sozialdemokratie* (Jena, 1911), which is criticized in S. Baron, *Die politische Theorie Ferdinand Lassalles* (Leipzig, 1923). A different, and for our purposes more significant, analysis of Lassalle's political theories is to be found in Franz Mehring, *Geschichte der deutschen Sozialdemokratie* (Stuttgart, 1897), Vol. I, pp. 515 *ff.*, and Eduard Bernstein, *Ferdinand Lassalle und seine Bedeutung für die Geschichte der Sozialdemokratie*, in *F. Lassalle, Reden und Schriften* (Berlin, 1893), Vol. I, pp. 101-06. These last two authors, both recognized socialists, represent the way in which Lassalle's ideas were interpreted in pre-1914 German socialist circles.

[6] F. Lassalle, *Arbeiterprogramm*, in *Reden und Schriften* (ed. Bernstein, Berlin, 1893), Vol. II, p. 46. (My italics.)

[7] This same opinion is also expressed by Eduard Heimann in *Mehrwert und Gemeinwirtschaft* (Berlin, 1922), pp. 112 *ff.*, and by Lord Keynes in *The End of Laissez-Faire* (London, 1926), p. 45, who points out the utilitarian roots of nineteenth century socialism. *Cf.* also the pertinent remarks in Werner Cahnmann, *Der Ökonomische Pessimismus und das Ricardosche System* (Halberstadt, 1929), pp. 14-15.

[8] *Op. cit.*, pp. 168-69.

talism comes to its end, disintegrates, and falls apart, the better bourgeois society understands that, in the long run, it cannot defend itself against the thrust of socialist ideas, and the nearer we are also to the time when state socialism will be proclaimed in all earnest;—*the last struggle which social democracy will have to fight* will be fought under the slogan: *Here Social Democracy—Here State Socialism!*"[9]

In matters of trade policy the socialists overwhelmingly favored free trade. They supported the Caprivi treaties of 1892, which contained important tariff reductions, as a step in the right direction. This does not mean that protectionist arguments were not forthcoming from socialist ranks, but the proponents of protection were consistently defeated in party councils and lacked support from the membership at large.[10] The free-trade position of the German socialists was so unshakable that even a non-socialist writer called them the "guardians of that Manchesterism once so severely spurned by them."[11]

Socialist opposition to any form of nationalism appeared most clearly in the consistent socialist propaganda and parliamentary vote against militarism and the army and navy budget, and in favor of disarmament. Professor Hayek quotes August Bebel correctly as remarking in 1892 that "the Imperial Chancellor can rest assured that German Social Democracy is a sort of Preparatory School for militarism."[12] However, he omits to add that the remark was made ironically. In the session of December 13, 1892, the chancellor in a speech had remarked that army officers were satisfied with the discipline shown by socialist recruits. Bebel, referring to the discipline in the socialist party, then made the above remark. That it was meant ironically and was so understood is proved by the stenographic report which contains the word "laughter" after the quoted sentence.[13] It would be strange indeed if Bebel had meant these words seriously, since in his report to the Social Democratic Party Conference of the same year Paul Singer, the chairman of the conference, reaffirmed the attitude of the socialists to the military program of the government: "Not a man, not a penny for militarism, for the ruling military system."[14] This anti-nationalistic attitude of the socialists on numerous other questions—on agricultural policy, anti-monopoly policy, international treaties, colonial policy, and others—could be demonstrated by a mass of similar evidence.

[9] *Cf. Protokoll über die Verhandlungen des Parteitags der Sozialdemokratischen Partei Deutschlands* (Berlin, 1892), pp. 182-83. The whole debate, *op. cit.*, pp. 173-215, is very illuminating on the anti-statist attitude of the overwhelming majority of socialists.

[10] *Cf. Protokoll über die Verhandlungen des Parteitags der Sozialdemokratischen Partei Deutschlands zu Stuttgart* (1898), pp. 172-205.

[11] Julius Becker, *Das deutsche Manchestertum* (Karlsruhe, 1907), p. 99.

[12] *Op. cit.*, p. 169, note. Professor Hayek also says that the remark was addressed to Bismarck. In actual fact, Bebel's words were directed against a remark of Caprivi. Bismarck's chancellorship ended in 1890.

[13] *Stenographische Berichte über die Verhandlungen des Reichtags*, II. Session, 1892/93, Vol. I, p. 303.

[14] *Protokoll über die Verhandlungen des Parteitags der Sozialdemokratischen Partei Deutschlands* (Berlin, 1892), p. 131.

Professor Hayek bases his chief proof for the nationalist roots of German socialist on three writers whose ideas are said to have been developed by their acquaintance with socialism, and who published tracts of a highly biased and chauvinist nature during the First World War. These men are Werner Sombart, Johann Plenge, and Paul Lensch. Of the three only Lensch was an official party member. Sombart, it is true, had been sympathetic to the labor movement and had been fascinated by Marxian ideas, but he was a strong individualist intellectually and there is no doubt that his ideas were developed quite independently of his acquaintance with socialist doctrines.[15] Sombart himself, even before his break with the socialist movement, would have been the first to say most decidedly that he remained a partisan only as long as he found himself in agreement with Marxian ideas.

Plenge was never a socialist and never understood either Marx or the later socialist theories. This is rather neatly shown in a book review of Plenge's *Marx und Hegel* which Franz Mehring wrote in 1911.[16] The review is a biting satire of Plenge's ignorance of Hegelian and, above all, of Marxian doctrines. Even if this testimony of an eminent socialist theorist were not available, a glance at Plenge's writings would convince anyone of his utter incompetence to stand for anything but his own narrow views; he will also learn that Plenge was not only not a socialist, but not even a worthy critic.

There remains Lensch. Lensch actually was a socialist, and in his younger years had belonged to the radical wing of the party. He became a deputy to the *Reichstag* and (together with Haase and Karl Liebknecht) opposed the granting of war credits to the government when it was discussed in the August 3, 1914, session of the Social Democratic *Reichstag* fraction. It must have been in the short period between August, 1914, and the spring of 1915 that he changed his views completely. Part of this change might be explained by Lensch's ambitious character, and by his quarrels with the other leaders of the left wing (especially with Liebknecht and Rosa Luxemburg). Be that as it may, one thing is certain: Lensch's conversion was not representative of socialist opinion in general, and his nationalistic outburst was flatly repudiated by the majority of the party. Lensch's pamphlet, *Die deutsche Sozialdemokratie und der Weltkrieg*, was subjected to a ruinous criticism by Karl Kautsky and Gustav Eckstein, who attach to Lensch's pamphlet such epithets as "ridiculous," "directly wrong," and "erroneous."[17]

In general the attitude of German socialists during the First World War was one of surprising detachment and objectivity. There was a small group,

[15] This fact is emphasized again and again by the critical attitude which socialists adopted toward Sombart. More than once they declined to accept his public utterances as representing their views and devoted considerable space to give expression to their disagreement with Sombart, even in his "Marxian" period. *Cf.* especially Rosa Luxemburg, *Die deutsche Wissenschaft hinter den Arbeitern*, which appeared in 1900, and her article *Im Rate der Gelehrten* which appeared in 1903. Both articles are reprinted in Rosa Luxemburg, *Gegen den Reformismus* (ed., Paul Frölich, Berlin, 1925), pp. 221-51.

[16] *Die Neue Zeit*, Vol. 29, II, pp. 143 *f.*

[17] Gustav Eckstein, "Englands Siegespreis," *Die Neue Zeit*, Vol. 33, I, pp. 705-711, and Karl Kautsky, "Zwei Schriften zum Umlernen," *Die Neue Zeit*, Vol. 33, II, pp. 34-42.

led by Ludwig Frank and Eduard David, who confessed after the outbreak of the war their conversion from internationalism, but hardly one of them would have gone so far as to support Lensch. The majority of the socialists were opposed to a war of national aggrandizement. At the outbreak of the war a wave of patriotic enthusiasm, fanned by the press, swept the country; nobody remained unaffected and the great mass of Social Democratic workers swung around to the support of the imperial government. Hence many socialist deputies voted for the war credits, because they realized that otherwise they would be alienated from the masses whom they represented.[18] Nevertheless, there continued to be a consistent, strong opposition to the war, and the support of even those socialists who voted in favor of the military budgets was based on the condition that, in the case of a German victory, the peace terms should not include acquisition of territory or the subjection of foreign countries, and that, both internally and externally, the German government should further a policy of social reforms, of strengthening democratic institutions, and of increasing the political rights of the masses.[19]

Our analysis shows that German Social Democracy before and during the First World War was in overwhelming support of democratic and even liberal ideas and was almost completely lacking in nationalistic tendencies. Those exceptions which existed have proved to be either spurious or special cases and can hardly be used as representative of the dominating ideas or as typical examples for an indictment of the socialists. A careful study of the socialist writers and politicians (particularly of such representative figures as Kautsky and Mehring, Bebel and Liebknecht, Luxemburg and Bernstein, Hilferding and Bauer), would show that not the ideas of Fichte and German romanticism, but eighteenth century materialism and rationalism which inaugurated the French Revolution had a much greater influence on them than any other single source besides the works of Marx and Engels.[20] Thus the socialist movement in Germany before and largely also during the First World War was eminently anti-statist and internationalist and probably the strongest democratic force in the political arena of the Germany of Wilhelm II.

BERT F. HOSELITZ*

[18] August Winning, *Das Reich als Republik* (Berlin, 1928), p. 99, and Arthur Rosenberg, *Die Entstehung der deutschen Republik* (Berlin, 1930), pp. 71 *f.*

[19] *Cf.* especially the declaration of Haase on March 10, 1915 (*Verhandlungen des Reichstags*, Vol. 306, pp. 45 *ff.*); of Ebert on May 29, 1915 (*ibid.*, pp. 172 *ff.*); and on April 5, 1916 (*ibid.*, Vol. 307, pp. 857 *ff.*), of Scheidemann on December 9, 1915 on occasion of a socialist interpellation in the *Reichstag* to enter into peace negotiations with the Allies (*ibid.*, Vol. 306, pp. 430 *ff.*), and on May 15, 1917, on occasion of a renewed interpellation to determine peace aims based on international conciliation (*ibid.*, Vol. 310, pp. 3390 *ff.*).

[20] The importance of this fact was recognized clearly by Engels who placed much emphasis on the influence of English and French materialism on post-Hegelian German thought. See his *Socialism, Utopian and Scientific* and Part II of his *Ludwig Feuerbach.* The same view is also expressed by F. A. Lange, *Geschichte des Materialismus* (Iserlohn, 1877), Vol. II, pp. 70 *ff.*

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II

Mr. Hoselitz's criticism of Hayek's Chapter XII—or rather of his pages 168 and 169—is right as far as it goes. Bebel's utterance was ironical; why else should he and his party have voted against the appropriations for the army in the Reichstag year after year? Just as dogmatic and unanalyzed as was the party's belief in the socialization of the means of production as a domestic panacea was its belief in free trade in the international scene. It is no exaggeration to say that in all international questions, political and economic, the party blindly followed a radical, dogmatic liberalism.

The trouble is that Hayek has missed documents and arguments which would have made his criticism much stronger. Three of them may be briefly suggested.

In the last decade prior to the First World War a fairly vocal movement for colonies and tariffs developed in the group around the *Sozialistische Monatshefte*, a well-written magazine which gathered all elements dissatisfied with the dominant orthodox doctrine, intellectuals on the one hand, trade union leaders on the other hand. Hayek's witness Lensch at that time was on the extreme left of the party; but his later position was foreshadowed by many articles and other publications of that group, among which those by Max Schippel, Gerhard Hildebrand, and Ludwig Quessel were perhaps most discussed. Mr. Hoselitz would be right, however, in arguing that that discussion among intellectuals had little bearing on the attitude and policy of the huge party itself, suspicious as it was of non-workers anyway. To the average worker it was enough to know that free trade and disarmament would considerably lower the cost of living and would, presumably, eliminate the danger of war. Hildebrand's expulsion from the party produced no repercussions whatever.

A second line of reasoning might refer to many passages in the correspondence and journalistic work of Marx and Engels themselves. Engels's liking of, and expert knowledge in, military art have always been well known to students. This inclination in itself would not prove anything; the prophet of a frankly revolutionary movement is almost under obligation to study military chances and techniques. But in the context of the Marx-Engels philosophy of history this military interest took a curious turn. Engels is known to have elaborated a plan of strategy for the German General Staff in the French war of 1870 and to have rejoiced in the German victories over the French Second Empire, which certainly was not among the more attractive phases of French history. Engels's attitude was logical in view of his and Marx's trust in the superiority of dynamic large-scale organization to make the final victory of socialism more inevitable and the socialist society more efficient; they simply regarded the German victory as preferable from the point of view of the dialectical progress of the socialist movement. Here one can see that the development from Hegel to Plenge—who is a far more original and forceful thinker than Mr. Hoselitz would admit, and incomparably superior to Lensch

—really leads through a phase in the thinking of Marx and Engels themselves. Even more outspoken was their German nationalism in relation to Germany's eastern Slavonic neighbors, Czechs, Poles, and Russians. They fully shared the prejudice of the German middle class about the alleged cultural and intellectual inferiority of all Slavs. They regarded Czechs and Poles as fitting material for German domination in the interest of European unification and preparation for socialism and made no bones about their profound contempt for those peoples.

A few students only know these facts because, for obvious reasons, only a few care to know them; pertinent quotations can be found in the instructive, though obsolete, book by Henry Bamford Parkes, *Marxism: An Autopsy.* As to Marx's and Engels's judgment on Russia, they took the backwardness of the Czarist régime for evidence of Russia's inferiority, just as the Western orientation of their philosophy of dialectical progress was taken by Dostoevsky to prove the all-pervading corruption of all Western movements and the unique mission of Christian Russia. Their anti-Russian and anti-Slav bias (compare the contempt of cultured and assimilated German Jews, previous to Hitler, for Polish and Russian Jews as members of inferior cultures!) made world history when the Social Democratic party of Germany, in 1914, voted for the war credits on the ground that German progress had to be defended against the Czar, to whom the Western allies had ignominiously sold out in their blind hatred against and jealously of Germany. This is a complex picture, which shows much primitive German nationalism in German socialism but may not very well suit Hayek's purpose because of his own adherence to the Western ideology of progress.

The third point must suit him much better. There was a definitely totalitarian trend in many Social Democratic organizations under the Weimar republic. The excessive reliance of the big centralized labor unions on the state to govern industrial relations has often been referred to, less often their annexation and emasculation of the shop councils, which are the cells of industrial democracy. But an even more important development was conspicuous in many educational and leisure-time activities, when the working youth were urged, in the interest of proletarian culture, to set up their own class organizations for hiking and other sports, for chess and other games, and when the party claimed for the party-dominated elementary schools of the municipalities educational superiority over the family. This trend was by no means dominant, it is true, nor unopposed by the strongly humanist educators to whom the socialist movement was the left wing of a democracy conceived in the spirit of German idealism and poetry and transcending class lines. The two conflicting tendencies may have roughly coincided with the continued split, in the Social Democratic party itself, between its right wing, the former majority socialists, and the orthodox Marxist left wing, the former "Independents," who had split off during the war to oppose the unqualified acceptance of the imperial and military leadership and who rejoined the majority in 1922. But the political minority naturally was more conspicuous and may have counted more adherents in the cultural field than the majority, whose adherents merged their cultural activities with those of other

groups and classes. The strength and driving power of the movement here described cannot be doubted, although it is difficult correctly to appraise the sources of its strength. Was it merely the assertion of the totalitarian class tendency, which no doubt is inherent in Marxism, parallel to the victorious assertion of the same tendency in Russia and certainly much influenced by it? Or was it primarily a reaction to the growing totalitarian tendencies in German education in the opposite direction? At any rate, it was among the most spectacular signs of democratic disintegration in Germany.

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Addendum to *The Theory of Economic Progress*

I suppose that everybody who ever published anything has later wished he could alter it. At all events I find myself in that situation; and since one alteration that I would make, if I could, in my *Theory of Economic Progress* might help some readers to avoid what seems to be the commonest misinterpretation of the central theme of the book, I am tempted to try to offer it to my colleagues in this form.

We would all agree, I presume, that the values we all seek, individually and collectively, are those of human life and personality, the fuller realization of our potentialities as human beings, a greater measure of the creative achievements of the human spirit which in some sense or other make life worth while. The question is, What do these fine phrases mean?

For the overwhelming majority of mankind throughout history the answer to this question has been provided by revelation and authority, and, conversely, faith and obedience. But the development of reason destroys the intellectual sanction of authority and the validity of revelation, with the consequence that reason finds itself confronted with the sixty-four-dollar question.

The classical theory of the organization of the economic life of the community through the medium of price is a part of the effort we have made to answer that question. I don't see how anybody can challenge this. It has been declared and explained over and over again in a thousand different ways, and nobody has ever even attempted to explain the origin and growth and present meaning of the price theory in any other way. The question is whether the answer is correct and adequate. Offhand denial that it is any answer to any question seems to me to mean only that the deniers know in their hearts that it will not do.

What form does the answer take? In effect it is that of referring the whole problem to the individual conscience, one which comports closely with the whole "Protestant" trend of modern times, as many students have exhibited at length. We may disavow ever thinking that the price system achieves perfect justice, but we certainly have thought, and still think, it

does something. The most popular current phrase for what it does is that of bringing about the "efficient use of resources." And what, pray, does "efficient" mean? We would all agree, I judge, that it does not refer to any economist's notion of what is or is not efficient but rather to the consciences of all members of the community as registered in their "wants."

The price theory reposes a very great burden of significance upon wants, for obvious reasons. Not to do so in effect robs the key phrase of its key word, "efficient." It then becomes simply "the use of resources" that price effects, and we are instantly brought up against the unanswerable question, "So what?" If the price system has any significance at all, it is the significance it gains by "registering wants."

And what are wants? In recent years economists have taken to replying that wants are unanalyzable "primary data" and dropping the question like a hot poker. And well they might! It's a red-hot question, right enough, and it only gets hotter if we drop it back into the fire. For wants are significant only if they have the sanction of authority and the validity of revelation. That of course is what Protestantism claimed for the individual conscience. The only alternative is utter relativism, and that is the inescapable corollary of current sociological teaching.

This "absolute relativism," if I may be allowed such a phrase, is of course unsatisfactory both intellectually and practically, as a great many students have long since realized. Indeed, it is that realization which has impelled many intellectual leaders to turn back to the other alternative. But their resolution of the dilemma of contemporary social thinking, justified as it is by the intellectual bankruptcy of complete relativism, nevertheless does also merit the charge that it is a "failure of nerve." For the resolutely objective scrutiny of human behavior, especially in historical perspective, does reveal something more than the relativity of all wants and values to the fashions of the time and place.

Viewed in historical perspective the panorama of human experience does constitute an amazing achievement. It is easy enough to sneer at bathtubs and air conditioning. Nobody considers either of these the pinnacle of modern achievement. (One might just as sensibly dispose of Greek civilization by sneering at the absurd tonsorial practices of the contemporaries of Aeschylus and Plato.) Even if the last five centuries are left completely out of account, the span bounded by the Aurignacian caves and the cathedral of Chartres still represents an amazing achievement. To say that one society wanted caves and the other wanted cathedrals is simply ridiculous. The inescapable truth is that human experience does manifest a developmental pattern of some sort. To close one's eyes to it is simply to go blind.

This is the point at which I should like to offer my addendum. Because I have tried to focus my readers' attention on this developmental pattern and have tried to avoid repetition of empty commonplaces about the values of human life and personality and all that sort of thing, I seem to have left the impression that I am offering "mere gadgets" as the criterion of value *instead of* human life and personality, the fuller realization of our potentialities as human beings, the creative achievements of the human spirit, and so

forth; and because I have tried to exhibit and emphasize the logical and ethical and therefore economic significance of the continuity which is actually present in the technological process and in it alone and is therefore the sole alternative to the absolutism of revelation and the utter relativism of "wants," I seem to have given some readers the impression that I regard "mere continuity" as a master principle without reference to what it is that is continuous.

But misunderstandings such as these are as unnecessary as they are unfortunate. Surely there is no question of substituting anything else for human life as the sum of values. By all means let us assume our common humanity as the repository of all value. The question then is, With what meaning can we fill this otherwise empty commonplace? If I have questioned the validity of the axiom which makes "consumption" the "end" to which all other economic activity is the "means," I have done so because, for reasons I have given at some length, these words fail to supply the meaning we require and are largely responsible for the intellectual sterility of the price theory of which they are an indispensable part. They refer only to the "satisfaction" of "wants," of which we can say only that people want what they want.

In contrast to all that, the technological continuum, which contains all the arts, all the sciences, and the whole vast range of tools and skills and know-how of which the arts and the sciences are the highest expression, does in fact contain and embody the judgment of all mankind and of all ages as to what is most valuable in life and what makes life worth while. As such it is *not* something to be considered *instead of* the values of human life and personality, the fuller realization of our potentialities as human beings, and the creative achievements of the human spirit. Neither is it "merely" the scientifically-known instrumental "means" to the attainment of otherwise-known consummatory "ends." On the contrary, it is the answer which reason and organized knowledge give, and have always given, to the question what these fine phrases—human life and personality, the creative achievements of the spirit—mean. Living is doing. Only in doing does living become significant.

Whether this life-pattern of mankind is properly or adequately designated in terms of "instruments" or of "techniques" is a legitimate question. The terminological difficulty is indeed considerable. Long usage has wrought a most unfortunate cleavage between art and science and between both of these and the humbler but vastly more extensive activities of the whole race. The people who say that art embodies the solution of the problem are right but only partially right, and the same is true of science. Since both of these are consummations of activities and values that are common to all mankind, it seems closer to the truth to give the whole pattern some such common designation. This is the consideration that led Dewey to use the designation "instrumentalism" and Veblen that of "technology."

Dewey himself has recently declared that "technology" is after all perhaps the less misleading term, but that is certainly an open question. Certainly the language we use in dealing with these problems is open to improvement at

all times, and anybody who can find ways to improve on it will be conferring great benefits on all of us.

No such benefit accrues from the sneers of those who dismiss the whole effort as that of "making a god of the machine," "building more machines to build more machines to build more machines," etc., etc. Moreover, those who sneer assume a very grave responsibility. What is their answer to the conundrum of the utter relativity of wants? They have managed to becloud the basic issues to which their own efforts are presumably addressed with a smoke screen of curves and integration signs. But the issues still remain, and meanwhile time is running out. Revelation and authoritarianism still threaten to resume their ancient rôle. If price theory is only a way of abandoning the effort in the grand manner—if "value is indefinable," "wants are primary data," and "equilibrium is just equilibrium"—then its exponents can ill afford to sneer at anybody. If, on the other hand, price theory does indeed contain the answer, then its exponents would be well advised to find it and be quick about it.

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Cost Accounting and Statistical Cost Functions

The note which appeared under this title in the June, 1945, issue of the *Review* suggests that the linear biases of cost accounting contribute to the linearity of statistical cost functions, as these have been derived. The case presented was summed up in the statement: "Accounting data with their hazy rubrics and linear biases seem incapable of producing anything but a linear cost function."

Now it is true that the procedures of cost accounting are such as to yield figures for *unit product* cost with certain biases. The conventional notion of "normal cost" employed in the great bulk of all cost accounting is a kind of annual average cost; as such, it levels out cost fluctuations that arise from deviations from what is considered "normal" for the period, including variations in the rate of activity in the plant or department. It is also true that "the accountant's mixture of variable and fixed costs" is responsible for certain kinds of errors that may have misleading effects.[1] However, these facts need not surprise those who are familiar with the thesis developed in J. M. Clark's *Economics of Overhead Costs.*

There is a distinction to be maintained between accounting records of *cost incurred,* and those reclassifications of cost made by cost accounting procedures. The initial appearance of costs in accounting records as those

[1] See, for instances of the cost accountant's recognition of this:

Fred V. Gardner, *Variable Budget Control* (New York, McGraw-Hill, 1940), pp. 41-48, *ff*.

J. J. W. Neuner, *Cost Accounting* (Chicago, Irwin, 1940), pp. 674-97.

W. J. Vatter, "Accounting Measurements of Incremental Cost," *Jour. of Bus.*, Vol. XVIII, No. 3 (July, 1945), pp. 145-56.

costs arise from market acquisitions of goods and services or the building up of contractual obligations and equities is a quite different phenomenon from the results of cost accounting which appear in the form of unit product costs reflected in inventory valuations and expense charges. The figures obtained by distribution, apportionment and allocation of factory charges in the cost accounting process are indeed useless for statistical determination of marginal costs related to changes in the rate of output.

The data that are employed to derive statistical cost functions are not, however, cost accounting figures or income statement data. This is clearly indicated in the United States Steel study to which the author referred. In the report on this study, the basic data are tabulated under captions such as Interest, Taxes, Pensions, Payroll, Depreciation and Depletion. These are not figures which result from cost accounting manipulations; they represent measurements of costs incurred regardless of whether those costs have entered inventory tabulations or have been charged against operating revenue. Indeed, the report includes the specific statement: "The payroll figures do not exactly reflect the salary and wage costs in the goods sold, because some payroll goes into inventory, and some of the goods sold are taken from the previous year's inventory."[2]

Charges for interest are not recognized as factory charges, and do not enter the field of cost accounting under accepted practice; further, they are in fact time costs rather than activity costs in the first instance, and apply only to interest actually paid or accrued, not to interest on investment as a whole. Taxes and pensions are legal or contractual obligations of the enterprise as a whole, not merely the amounts carried through cost accounts. Orthodox accounting procedures do not recognize federal income taxes among factory charges at all. It would seem that cost accounting had but little to do with the form or the content of the data used in the study referred to.

There is, of course, one source of linear bias that permeates all accounting procedure: the problem of joint-cost. This is reflected in a great many phases of accounting;[3] for the present purpose it is important that two specific instances be recognized.

The first of these is the case of storable goods purchased for inventory and later released to operating centers. Here, the stream of incoming charges viewed against another stream of withdrawals from stores raises a joint-cost problem of no small dimensions, especially with regard to price fluctuations. To the extent that averages are used in pricing withdrawals, the effects of price changes are distributed linearly. But even this could affect the data employed in a statistical cost study only through inventory valuations at the end of the respective years, and such influences would be slight. In any event, the physical measure of units withdrawn from stores in total—the kind of data useful for statistical purposes—would be entirely undistorted by any accounting procedure.

The second instance of joint cost is the problem of amortization encoun-

[2] United States Steel Corporation, *T.N.E.C. Papers,* Vol. I, p. 241.

[3] W. J. Vatter, "Limitations of Overhead Allocation," *Accounting Review,* Vol. XX, No. 2 (April, 1945), pp. 163-76.

tered in the form of depreciation and depletion charges. The spreading of fixed asset cost on a time basis would of course yield fixed charges for any given year. The assignment of such charges on the basis of physical units of material or product, or "production hours" bases would result in variable charges, but charges that would tend to be constant for each unit of output, and hence "linear" for purposes of determining cost functions. In any event, this is not a cost accounting problem, nor do the results depend upon accounting technique beyond the necessary compromises for the sake of getting some reasonably useful answer to the problem. There are elements of expediency in every measurement—"the very meaning of measurement depends upon what we happen to be measuring."[4]

This writer has no desire to take a position on the issue of whether, in the statistical studies referred to, the "significant elements of cost variation have been smeared into linearity to the point where the results begin to lose their meaning as cost functions." The record should be made clear, however, as to the source and the amount of linear bias introduced by cost accounting procedures in enterprise cost-determination by statistical methods.

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[4] P. W. Bridgman, *The Logic of Modern Physics* (New York, Macmillan, 1928), p. 16.

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BOOK REVIEWS

Economic Theory; General Works

General Equilibrium Theory in International Trade. By JACOB L. MOSAK. Cowles Commission monog. no. 7. (Bloomington: Principia Press. 1944. Pp. xiii, 187. $2.50.)

This is a little gem. In the modern period of ascendency of the journal article, advanced treatments in book form of fundamental economic problems are all too rare, and this one provides a masterly, compact exposition and commentary on that highest development of the neo-classical school of thought, Hicks's *Value and Capital.* It is only fair to warn the reader that part of the compactness of the book and much of its elegance stems from the fact that the author has not hesitated to treat essentially mathematical subjects mathematically.

Not more than one-third of the book is concerned with international trade, which is probably as it should be, as this subject—aside from its traditions and policy aspects—constitutes an analytical special case of general economic theory. The great advances which have been made in economic theory since Alfred Marshall are pointed up by a comparison of Mosak's treatment with the fifteen-year-old *Mathematical Reformulation of International Trade* of Theodore Yntema, a work confining itself to the application of partial equilibrium analysis to international trade. The present approach is more akin to the spirit of classical English international trade theory (which achieved its manageability not so much by making the *ceteris paribus* assumptions of partial equilibrium as by confining attention to highly simplified few-commodity-factor-country cases). And at the same time that the greater generality and comprehensiveness of the Walrasian system are achieved, skillful use of secondary maximum conditions and market stability conditions breathes formal fruitfulness into the analysis; so that the demonstration that an equilibrium is causally complete and subject to determinate economic law can be supplemented by the description of the qualitative properties of that law.

In the literature of international trade the "Transfer Problem" has enjoyed a considerable vogue ever since the famous Keynes-Ohlin controversy over the secondary reparation burden upon Germany resulting from adverse changes in her "terms of trade." Here, for once, Keynes seemed to be in the uncharacteristic position of siding with the classical camp, in that his position coincided with that of such orthodox stalwarts as Pigou and Taussig. Of course, more careful historical research revealed affinities between the self-

styled "modern" approach of the Ohlin followers and that of Ricardo, Bastable, Wicksell and others. It is the more surprising that Keynes, who has recently placed so much emphasis on income effects, should have left their elucidation to Ohlin, confining himself to a purely statical Marshallian equilibrium analysis in which, erroneously, the offer curve of one country fails to shift.

Mosak subjects the statical problem to a careful reëxamination. He seems to abstain carefully from explicitly acquiescing in the prevailing opinion of Viner, Haberler, and others that, while the terms of trade *may* shift in either direction, there is an *a priori* presumption that they will shift *against* the paying country. In a statical world of exchange of two commodities between two countries with no transportation costs or tariffs, the qualitative answer is seen to be independent of price elasticities of demand and to depend only upon the relative income-elasticity shifts of demand between the goods in each country. *Absolutely no presumption in either direction seems indicated.* When he comes to taking production effects and other factors into account, Mosak indicates how the answer depends upon relative substitutability and complementarity of domestic products and factors with the import and export goods of each country. Perhaps purposely, he refrains from stating whether the "presumptions" enunciated in Viner's *Studies in International Trade* are valid, although he does qualify the conclusions found in that book on the much less important problem of absolute price levels and gold distribution. As Mosak himself is probably aware (*cf.* p. 38n.) these results are rather trivial, since the analysis proceeds upon the basis of artificial "neutral" money assumptions which, if valid, make the problem of absolute prices of little consequence.

It is this reviewer's conjecture that (1) there may be something after all in the orthodox position that terms of trade shift against the paying country; (2) that once again Keynes's intuition had run ahead of his powers of analysis; (3) that Ohlin and not Keynes was "classical," in the "bad" sense of having an inadequate theory of effective demand of the implicit Say's Law variety; and (4) that the essential condition for the orthodox presumption lies in the Keynesian "leakages" or *incomplete* income effects. Throughout Mosak is Hicksian rather than Keynesian—which is quite a difference!—so that we must wait for Lloyd Metzler's forthcoming book to throw more light on these matters.

Space precludes a detailed discussion of Mosak's felicitous exposition of modern economic theory. Suffice it to say that here is an ideal one-hundred-page textbook assignment for intermediate and advanced classes. Also, almost casually in passing, Mosak corrects the Hicksian error that extreme complementarity may make a symmetrical system unstable (p. 42); the widespread Keynesian impression that a positive rate of interest is "merely" a liquidity premium which would disappear if uncertainty and transaction friction were abolished (p. 20); two arguments of Frank Knight as to why the rate of interest could never be zero (p. 121 and p. 141); and a number of other important misunderstandings. The present reviewer is still not quite at ease with Mosak's analysis of the possibility of unemployment (*circa*

p. 154), any more than he feels that Hicks has performed a successful marriage between Walras and Keynes or between those two neutral money economists, Ricardo and Lerner.

Finally, the profession must be grateful that one of the ablest young economists should have found the time and energy in the midst of important wartime duties for the arduous task of preparing a difficult manuscript for publication.

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The History of Economics in Its Relation to Social Development. By W. STARK. (New York: Oxford Univ. Press. 1944. Pp. viii, 80. $2.00.)

This little book was written in the Marshall Library at Cambridge by a German scholar who came to England in 1939. Despite its large title, it is not a history of economic thought in the usual sense of the term, but is a brief ambitious essay in the materialistic interpretation of economics. The author concedes that his "point of view is not entirely new," but thinks "it is here for the first time consistently applied." It is a now familiar thought that economic theory, being an attempt to understand and explain economic conditions, undergoes change as conditions change. However, it is generally recognized that theory changes more or less tardily and imperfectly, and that at any one time there are rival theories with many shades of difference. But the author means by what he calls the consistent application of this view, its extreme application without qualification. He declares: "Every single theory put forward in the past [is] a faithful expression and reflection of contemporary conditions." No place is left for intellectual and temperamental differences, education, or personal and group interests, conscious or unconscious. The various economic doctrines in each of the four periods recognized by the author, were, according to his view, all of one piece, all equally faithful interpretations of contemporary conditions.

In his effort to make this *a priori* generalization appear to fit the stubborn facts, the author has had to juggle dates and ignore the realities to an astonishing degree. For example, it does not give him pause that in the period between 1750 and 1820 (which he conceives of as a unity) the theories of the physiocrats, Adam Smith, Lauderdale, Say, Malthus, Ricardo, and others, were in many ways conflicting; according to the author, each was faithfully "mirroring the socio-economic reality within which it took its origin," to borrow one of his figures. He sees no difficulty in the fact that in 1803, J. B. Say in France, rejected Smith's labor theory of value and recognized the essential rôle of capital in relation to value; whereas, in far more mechanized England, Ricardo, fourteen years later, still defended the labor theory with its absurd consequences in distributive theory. We are asked to believe that Ricardo was logically justified in accepting the labor theory in 1817 because at that time so little "fixed capital" was in use in England, but when he partially repudiated the doctrine three years later (as evidenced by a letter to McCulloch), he simply "yielded to the victorious march of mechanization" which, it is implied, had occurred in England

between 1817 and 1820 (years of financial depression). Say's vigorous and effective criticism by letter, personally, and in print, in the intervening years, had nothing whatever to do with Ricardo's partial change of heart! Rather, it has escaped the author's attention.

It would be unprofitable to test the author's heroic generalization in other equally vulnerable assertions. His versatile scholarship ranges widely over philosophy, literature, religion, and the other social fields, yet serves but to ornament an ill-arranged and repetitious argument. The result is not so much to clarify as to bewilder the reader.

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The Idea of Progress in America, 1815-1860. By ARTHUR ALPHONSE EKIRCH, JR. Stud. in hist., econ. and pub. law, no. 511. (New York: Columbia Univ. Press. 1944. Pp. 305. $3.50.)

"This study is an effort to portray the American faith in progress during an important period of our history and to analyze the idea in terms of the interests and groups which it served or promised to serve" (p. 7). The task undertaken presented special difficulties, because the generalization of faith in progress among all elements in a diverse population produced a great variety of interpretations of this vague and imperfectly developed concept. The intellectual significance of the concept was obscured, and in this period was clearly of secondary importance in the United States. The writers and orators used the idea of progress as a means to their immediate ends without much regard for the critical problems involved in distinguishing the idea of progress from related concepts of growth and change. It is somewhat bewildering to pass in review such a mass of conflicting material without any positive analysis of the idea itself. One naturally asks the question, Did the experience of the United States in this period contribute in any way to the development of the idea of progress? No answer can be given unless we have some clearly defined statement of the content of the concept as it came to the United States from Europe, and some notion of the meaning given to the concept by the most thoughtful minds in 1860.

The author is more concerned with the attitudes of various writers than with the validity of the ideas expressed, so that it is not easy to discover what view he adopts. He cites with evident approval some passages from Bury that give tone to the whole text. "This idea that 'civilization has moved, is moving, and will move in a desirable direction' has been compared with the concepts of Fate, Providence, or personal immortality. Like those ideas it is believed in not because it is held to be good or bad, nor because it is considered to be true or false . . . 'belief in it is an act of faith' " (p. 11).

If we are to think of progress as an essentially intuitive act of faith in the forward movement of the entire social process, there would be little possibility of analytical treatment, and no reason to suppose that the ideas of one generation were much better or worse than those of another generation. From such a point of view, the American experience in the early nineteenth

century would be just a demonstration of the significance of this faith in a period of intense activity over the whole field of social development.

If we approach history in a somewhat less empirical mood, we may treat the idea of progress as a vital element in a concept of evolutionary process, subject to critical analysis, and distinguishable from mere change and growth. Such an attitude toward the concept of progress would require us to recognize that no mature formulation of the idea would be possible in the eighteenth and early nineteenth centuries, because the theory of evolution was so ill developed that no effective discrimination among the three basic concepts would be possible. The history of the idea of progress in the United States between 1815 and 1860 is a study of an idea in a period of maximum confusion among the various concepts that should be distinguished. Evolutionary thought was too incomplete, historical writing too largely empirical, and the popular will to believe too credulous to lead to anything but utter confusion.

The careful empiricism of the author gives us a painfully complete demonstration of this confusion of thought. Readers would be comforted if this confusion were offset by a positive statement of the meaning of progress today. In all this welter of ideas, what can we now accept as sound, what must we characterize as merely naïve, what must we stigmatize as a manifest perversion of a noble concept?

Any distinction among the concepts of change, growth, and progress must in some way restrict the idea of progress to the cumulative achievement of increased knowledge and skill. Mere change and growth must be excluded, as related but different phenomena. Early nineteenth century concepts of progress regularly included all phases of growth and change. The doctrines of manifest destiny and pro-slavery arguments included various elements that cannot be reconciled with any worthy social ideal.

There is, of course, a great deal of significance in an empirical study carried out with such energy and patience. In addition to the major works of leading authors and public men, a wide array of magazines was examined and many academic and occasional addresses were read. A considerable amount of manuscript material was examined, covering both letters and unpublished orations. The study rests, therefore, upon an unusually wide selection of literary sources. It exhibits the thought of the period at its best and at its worst: in its most inspired moments and in its most naïve deliverances. The review of this material is in itself a proof of intellectual progress: our thought does move forward.

There is a short sketch of the development of the idea of progress in Europe in the late eighteenth and early nineteenth centuries. The contacts with American thought are described with care, though with little detail on matters of doctrine. "The promise of the American political experiment" covers our faith in democracy, but includes also the attempts to justify our Indian policy, the war with Mexico, and the covetous longing for Cuba. It is painful, at this time, to read once more these justifications of ruthless aggression. The later chapter on the defense of slavery discloses some curious attempts to sanctify oppression and exploitation. Progress is presented as inevitable, impersonal, and ruthless. The chapters on Material Expansion,

Advancing Faith in Science, Programs for a New Society are loosely put together, but provide many interesting commentaries on the movement of thought. The discussion of the idea of progress held by the radical reformers is perhaps the most interesting single block of material. The contacts with Owen and Fourier provided continuing ties with European thought, and the transcendentalists gave a new tone to all the ideas.

These chapters emphasize the dangers that are incurred, when this single concept is detached from the larger systems of thought of which it is a part. Philosophical and literary critics deal with the history of ideas either by systematic analysis or by a rigidly defined treatment of the thought of a particular thinker. Each method has advantages and disadvantages: neither method can be pursued to the exclusion of the other. Dr. Ekirch raises the significant question of the validity of an approach through pure historical empiricism.

The achievement does not provide evidence that this method is sound or practicable. We have to deal with so many divergent concepts of progress that there is no clear focus of thought, and even the significance of the differences of opinion is lost. We have here no adequate account of the differences in the general approach to history and social development that lead to the wide range of differences in the idea of progress. Diversity becomes confusing when we have so little understanding of the grounds underlying these sharp conflicts of opinion. It is, therefore, difficult to feel that the historical development of ideas can be described significantly without more systematic analysis than Dr. Ekirch provides in this volume. He could perform a very great service to intellectual history if these studies could be carried further and developed on a larger scale with a somewhat different technique.

ABBOTT PAYSON USHER

Harvard University

Social Darwinism in American Thought, 1860-1915. By RICHARD HOFSTADTER. (Philadelphia: Univ. of Pennsylvania Press. 1944. Pp. viii, 191. $2.50.)

The tradition of Jeffersonian democracy is but one trend in American social thought. Another heritage is that of fatalism, inequality, and pugnacity. Although the latter legacy, however cunning its political and religious disguises, can be traced easily to colonial times, its deliberate and systematic elaboration was undertaken only in the rugged half-century between the Civil War and the First World War. At present, when the ideal foundations of the American republic are defended against many-sided attacks, not only their own history and validity but also those of their opponents require reexamination. The brief monograph under review is concerned with the rise and decline of that phase of American social thought which was generated by Darwin, directly or indirectly through Spencer.

To facilitate an understanding of the intellectual climate in America in the two decades following the Civil War, the author opens with a description of the powerful acclamatory and refutatory impact of Darwin and Spencer on the American scientific and religious publics. The theoretical implications of

social Darwinism are demonstrated in the works of Sumner and Ward, the antipodean protagonists of the reaction to Darwin and, more directly, to Spencer in America. To show the social and ethical neutrality, if not elasticity, of Darwin's principles, the author then introduces a rather heterogeneous group of Darwinian interpreters, such as Goldwin Smith, Fiske, Drummond, and Kropotkin, who arrived at conclusions different from, and partly contrary to, those of Sumner. If this discussion serves as a balancing corrective to Sumner's one-sided inference of *laissez-faire*, the subsequent account of miscellaneous dissenters, such as Henry George, Bellamy and Cooley, strengthens the argument of Ward's meliorism. Of the final three chapters, concerned with pragmatism, trends in social theory before the First World War, and racism and imperialism, the most significant is that on pragmatism which countered most successfully the doctrines of social Darwinism which was declining anyway, and theoretically, although not historically, completed its fall.

The author's general aim of pursuing the historical development of Darwinian thought in American social theory has been achieved with judicious scholarship and literary skill. Considering the medley of social Darwinism, which only too frequently is as alien to Darwin's theories as Marxism is to Marx's, such an historical survey is almost a labyrinthian task. Although predominantly descriptive, the monograph ventures occasionally into interpretative analysis, especially with reference to the ideological nature of the social concepts of struggle for existence, survival of the fittest, and automatic progress. The author shows convincingly that these notions served as "scientific" explanation, and vindication, of the prevailing rugged individualism and predatory capitalism, and, later, of expansive imperialism.

It does not diminish its merits to point out that the study, being essentially an historical description, must be regarded as preparatory to a theoretical, especially ideological, investigation guided by the methods and aims of critical theoretical interpretation and, particularly, by requirements of the sociology of knowledge. A descriptive survey such as the present monograph has no reason to concern itself with the critical problems of meaning, logic and validity of the theories it reviews, and is, consequently, unable to reach theoretical conclusions. When, however, it does make incidental excursions into ideological issues, it is apt not to go beyond the elementary discovery that there is a parallel between the prevailing social, economic and political forces and the ideas propagated by the ruling class. One must recognize that even this valuable finding is fruitful only if it serves as a starting point for further examination of the relations between social structure and ideal superstructure. Moreover, meticulous concentration is required to avoid facile errors. For instance, there is the seeming paradox that the individualist Sumner rejected the principle of conflict in society, while the meliorist Ward accepted it. Is it not possible that, contrary to general assertion, the principle of "struggle for existence" may constitute the ideology of the ruled, as well as of the ruling, class?

Finally, it should be acknowledged that the author has been fully aware throughout the study that the salient theoretical issue of social Darwinism

concerns the implications of biological determinism for ethics and social action. The historian may well depict the period from 1860 to 1915 as a unit. The social theorist, however, would be ill advised to try to analyze Darwinian social thought without recourse to Malthus, with whom the biological movement of the nineteenth century began. Since almost all basic principles of Darwinism are traceable to Malthus, the social theoretical study of biological determinism must start with his doctrine. In spite of its fundamentally utilitarian orientation it constitutes the beginning of the pessimism and the irrationalistic positivism which Darwin later developed systematically, and which, far from ending in 1915, is one of the roots of the contemporary social and intellectual crisis.

PHILIPP WEINTRAUB

Hunter College

Economic History

The House of Hancock. By WILLIAM T. BAXTER. (Cambridge: Harvard Univ. Press. 1945. Pp. xxvii, 321. $3.50.)

This volume, No. 10 in the series of Harvard Studies in Business History, is a study of the rise of the Hancock fortune under Thomas (1724-1764) and its decline under his more famous nephew John (1764-1793). Actually the detailed story of the business is carried only to 1775, after which date John Hancock shifted his main interest to politics and turned over what was left of his business to subordinates. The study rests largely on the Hancock Journals and Letter Books, most of which are in the collection of the Harvard Business School. The Hancock ledgers have been lost, but the author has been aided by the more complete accounts of Daniel Henchman, a merchant who aided Thomas in his early years and whose daughter Thomas married.

The book carries the subtitle *Business in Boston, 1724-1775,* and Professor Gras in the "Editor's Introduction" describes it as "a chapter in the history of mercantile capitalism—the oldest and longest-lived system of large-scale business." The American economic historian will find an even greater significance in this study. The reviewer has never discovered a clearer description of the technique of colonial trade as carried on by the American merchant and the problems which he faced. Moreover, the author, a professor of accounting in the University of Cape Town, evidently approached his task with a particular interest in the early technique of his own profession and fortunately with a flair for writing. The career of Thomas Hancock from his apprenticeship to a Boston bookbinder, through his long years as a merchant (importing, exporting and selling in Boston and the hinterland) to his activities as a government contractor in King George's War and the French and Indian War, include almost every phase of business activity open to a colonial merchant. How Thomas accumulated one of the largest fortunes in the colonies at a time when the carrying on of business of any kind was surrounded by the utmost difficulty gives ample opportunity to

develop the atmosphere and environment as well as the technique of eighteenth century trade. The mere conduct of business in an era of inadequate facilities in currency, banking credit, transportation and communication make the triumphs of later finance capitalists sometimes seem small indeed.

The author calls Thomas a "general merchant" and the title is appropriate, partly because it was difficult to be anything else if one operated on any scale in the colonies. Hancock, however, was more than that. Although no business was too small or, for that time and place, too great, Thomas sometimes specialized in a commodity with or without partners, bought or sold ships to carry his own commodities when such action seemed profitable, tried his fortune as a manufacturer and a land speculator, carried out army contracts, owned shares in privateers and was not averse to the evasion of mercantile laws or to a little smuggling. Thomas tried specializing in potash, whale oil and other commodities, but his success as a business man was mainly because of a willingness to shift quickly from one project to another as opportunities opened. His greatest profits came from army contracts. Contrary to copy-book maxims, specialization was not the road to wealth in colonial America, at least not to Thomas Hancock.

Little known to historians, Thomas Hancock played an important rôle in the business life of Massachusetts and in the development of the port of Boston. He willed his business to his nephew John, whom he had adopted and trained. But the business which Thomas had taken forty years to build up, John ruined in ten. Whether it was an inferiority complex from years of insecurity which impelled him to bold enterprises beyond his capacity, his increasing absorption in politics, or the fact that he operated in a period of declining prices and profits, John Hancock proved himself a poor business man. His economic career has but minor interest except in the part that he played in opposing British trade acts, and this opposition undoubtedly became increasingly political. Although the author comments briefly on all this, the story of the Hancock business closes with 1775, the year that John became President of the Continental Congress.

Professor Baxter ends the book with a chapter of general conclusions gleaned from his study of the Hancock business. Emphasizing again the inadequate communication and currency systems of the colonial period, he notes the minute scale of business operations. From the standpoint of volume and even of technique "American trade seems to have been nearer the middle ages than to our times." There is interesting discussion both of the rôle of the agent and of the partnership in colonial trade. Regarding the system of mercantilism, the author notes how it delayed improvement in communications, intensified the smallness of markets and aggravated monetary difficulties. The Hancock records do not mention a single case of participation in colonial trade by a foreign ship. On the other hand, mercantilism by no means always worked to the benefit of the home country. While the American market was held in thrall by Britain and British exporters extorted high prices, they also had to finance colonial trade in a lavish fashion. Prosperity, as Hancock proved, could come to colonials as well as to Britons.

The discussion gains significance when it is realized, as the author points

out, that the "unspecialized merchant" represented by Hancock was the "most vital figure in New England economy," just as the "merchant-capitalist" (which Hancock also was) represented the dominant force in contemporary Europe. Except for the detail on the business history of Thomas and John Hancock, this volume may add little to the knowledge of the colonial specialist; but it will make clear to the student and general reader the technique and problems of eighteenth century colonial trade. Despite the difficulties of wartime restrictions the paper is reasonably good and the format excellent. Fortunately the Series, in this volume, has dropped an earlier abomination of collecting the footnotes at the end of the book.

HAROLD U. FAULKNER

Smith College

Andrea Barbarigo: Merchant of Venice, 1418-1449. By FREDERIC C. LANE. Stud. in hist. and pol. sci., Ser. LXII, no. 1. (Baltimore: Johns Hopkins Univ. Press. 1944. Pp. 224. $2.25.)

There is no "Andrea Barbarigo" in the *Enciclopedia Italiana;* indeed, Professor Lane is his first biographer. What inspired this biography was not the thought that Barbarigo needed a Boswell but rather the discovery in Venetian archives of Barbarigo's business papers—"the most complete business records which I have been able to find for any one Venetian merchant or mercantile firm." Of course, no quantity of manuscripts can make a merchant prince out of a moderately successful business man. Neither hero nor villain in the eyes of the author, Barbarigo furnishes a convenient focus and point of departure for the historical study of business methods and motives, forms and organizations, success and failure. Mr. Lane has admirably described his objectives:

> The method here attempted is a sort of combination of biography with institutional history. I am not concerned, as is the true biographer, with the individual for his own sake and with his whole personality. I am interested in the individual as a means of interpreting certain institutions of his time. By means of Andrea Barbarigo's business records I have attempted to learn his hopes and fears and accordingly to discover what kind of influence was exerted on his behavior by various Venetian institutions such as the regulated voyages of the merchant galleys. . . . What sort of a merchant found these institutions favorable is the main question I have tried to answer. . . .
>
> This kind of a study of types is better called sociological than psychological because it does not aim at a full analysis of personalities. . . . Economic historians have sometimes made the mistake of assuming the existence throughout recorded history of a perfectly rational and never changing *homo oeconomicus*. I hope that I have avoided this pitfall, that in picturing the profit-seeking calculations of Andrea Barbarigo I have let clearly appear how far his way of thinking was conditioned by the mercantile customs and the value judgments which were general in fifteenth-century Venice.

It seems to me that in "Public Protection and Private Enterprise," the second of the three chapters which constitute the text of this monograph,

Professor Lane has realized these objectives in the most laudable fashion. Impressive factual evidence combined with careful reasoning yield a clear and convincing exposition of the division of entrepreneural functions (in foreign trade) between the state and individual Venetian merchants. Working through the publicly-auctioned contracts with galley masters, the Senate established a monopoly of ocean-going transportation. At the same time it prevented the monopolization of the use of transport, since any merchant could ship the kinds and quantities of goods he chose to export or import—within the limits of the tonnage of bottoms made available by the Senate. The sailings of single, unarmed ships were not infrequent; but the great galleys carried the bulk of trade between Venice and the Levant, Flanders, and England.They sailed in convoy under an admiral appointed by the Senate and the state fixed freight rates.

The conclusion is reached that in an age which required expensive protection of maritime trade less state intervention would have promoted the formation of exclusive joint-stock companies and, consequently, the individual trader would have enjoyed less freedom of opportunity than under the regulated voyages of the galleys. "To compare the Venetian Senate to the board of directors of a joint-stock company, as has been done, completely misrepresents the amount of freedom left to the individual merchant." Of course, freedom is relative to time and place: in fifteenth-century Venice virtually all exporters and importers belonged to the nobility. Andrea Barbarigo's family "stemmed from the old Venetian nobility and had been prominent in Crete."

Andrea was the "restorer of his family's fortunes." His father, the commander of a fleet of galleys returning from Alexandria in the winter of 1417, was publicly disgraced and heavily fined for violating long-established rules of navigation and for deserting a shipwreck. Deprived of an inheritance by his father's misdeeds, Andrea, at nineteen, began his business career with some 200 ducats. At his death he left an estate of less than 15,000 ducats, "a substantial amount although not a big fortune for that day." Cosimo de' Medici and his brother had fifteen times as much in 1440. The sons and grandsons of Andrea further augmented the family fortune, but by the end of the century, the Barbarigos were less merchants than landowners, *rentiers*, and officeholders.

Andrea Barbarigo was an independent operator; his business was an individual proprietorship. In contrast, the leading mercantile firms of Venice were family partnerships (*fraterne*). Mr. Lane finds that the development of the fifteenth- and sixteenth-century *fraterna* paralleled modern corporate organization in certain respects. Thus, the family firm "acquired subsidiary partnerships" and, "when it embraced the members of one of the richer families, became a sort of combination of investment trust and holding company." Interesting case studies are presented here as well as in the author's recent article on "Family Partnerships and Joint Ventures." Although the statements are hedged, the reader may still be reluctant to accept the accuracy if not the usefulness of the analogies. When a partnership ventures some of its funds in another partnership, the resultant enterprise, in structure

at least, might best be compared with the modern syndicate of the type familiar in the field of investment banking.

Barbarigo's foreign business was done by consigning goods to agents; he made no use of the *commenda* partnership, or profit-sharing arrangement once general throughout the Mediterranean. What brought about the discarding of the *commenda* in favor of the commission agent? "Two reasons of enduring influence are apparent, one having to do with the law, the other with accounting. Profit-sharing smacked of a partnership, in this case a partnership with limited liability for one of the partners, and Venetian courts and legislators did not approve of partnerships with sleeping partners of limited liability." The legal explanation seems sound: it was easier to task an agent than to bring into court an individual whom the law might regard as a mere partner of the plaintiff.

The accounting explanation at best appears to be incomplete. According to the author, "if a merchant resident at Venice shipped regularly to a merchant resident abroad, who sold for him, there would be plenty of room for argument over the real value of the wares shipped, and, of course, the amount of profit to be shared would depend on what was reckoned to be the original value of the wares." Substitute "amount of commission to be paid" for "amount of profit to be shared" and the statement should be equally valid. It is not pointed out that profit-sharing entails loss when there are no profits to be shared. A prolonged period of falling prices would have endangered profits and furnished a strong incentive for switching to the commission basis.

Perhaps too much space has been given to criticizing what constitutes a small part of this chapter on "Business Associates and Opportunities." Its real contribution lies in the fullness with which it describes and appraises the merchant's relations with agents, relatives, and friends in Syria and Palestine, Spain, Flanders, and England. Barbarigo was one of the sedentary merchants "discovered" by Professor Gras, and his problem of business administration was to a considerable degree one of selecting reliable associates and agents in foreign markets. If he "utilized extensively ties of affection, both those based on personal friendship and those presumed to rest on family connections," nevertheless he found occasions to sever relations with an incompetent agent and to sue in the Giudici di Petizion an unfaithful representative. Within the limits of the restraints imposed by Venetian institutions he was resourceful, adaptable to changing circumstances, and bold. Undeterred by losses in many ventures, he persevered until gains greatly overbalanced his losses. Like Antonio, Andrea Barbarigo might have said,

> My ventures are not in one bottom trusted,
> Nor to one place; nor is my whole estate
> Upon the fortunes of this present year:
> Therefore my merchandise makes me not sad.

Four critical notes take up the last third of the book. The longest of these deals with accounting methods. Professor Lane presents data which challenge several accepted notions on the development of double entry and the use of journal, ledger, and trial balance. Sieveking claimed that double entry was

imperfectly understood at Venice around 1410, but a reëxamination of mercantile account books refutes this opinion. Too often writers have jumped at the conclusion that the failure to use certain methods meant that they were unknown, whereas indifference and inefficiency may account for their non-use. For instance, "there is no reason to believe that trial balances of any kind were compiled frequently." Asset accounting appeared less important to Barbarigo and his contemporaries than to the modern merchant or corporation. Although the merchants of Venice were profit-minded and eager to make each venture a source of gain, neither the laws nor the customs of the land made it necessary or even useful for the merchant to know his net worth from month to month.

ROBERT S. SMITH

Duke University

The Fall of the Old Colonial System. By ROBERT LIVINGSTON SCHUYLER. (New York: Oxford Univ. Press. 1945. Pp. vii, 344. $3.00.)

In April, 1830, the *Westminster Review* summarily described the British colonies as "impediments to commerce, drawbacks on prosperity, pumps for extracting the property of the many for the benefit of the few." This is the voice of British liberalism which gradually transformed the political and economic organization of the United Kingdom and revolutionized the relationship of the metropolis to the imperial colonies. The impact of this movement on certain aspects of the British Empire from 1770 to 1870 is the subject of Professor Schuyler's new book. His approach is through an exposition of anti-imperialist reasoning from Josiah Tucker and Adam Smith to the Manchester School and Gladstone's first cabinet, and the disintegration of the Old Colonial System as reflected in the changes wrought in the complex structure of commercial regulations and imperial defense. It took about a century for economic liberalism to be conceived, crystallize and become dominant. Indeed, the 1860's which witnessed the climax of liberal anti-imperialism also marked the incubation and birth of a reactionary trend that shortly was to grow into a new and lusty appetite for Empire.

To be sure, as Professor Schuyler sets forth, Little Englandism was confined to rather small groups of statesmen, intellectuals, and business men. Even in the 1860's, majority opinion toward the colonies was one of apathy resting on an inert "habit of Empire." It did not clamor for dismemberment of the imperial connection. Although the policy of the metropolitan government—particularly in withdrawing imperial garrisons from the settlement colonies—elicited the colonial complaint that Great Britain was casting its dependencies adrift, no member of the government ever proposed outright a separationist program.

In some ways, the author observes, liberalism encouraged the subsequent change from Empire to Commonwealth as well as a revival of interest in colonial acquisitions. "Free trade, it must be admitted, came near to dissolving the British Empire. But it also made possible in time the conception of a new type of empire, in which colonies were to be viewed rather as allies and

partners . . . than as dependencies" (p. 165). Also, "by diminishing the burdens of empire, of which the anti-imperialists had always made so much, the government, whatever motives may be ascribed to it, removed the principal argument against maintaining the Empire. In doing so, it helped to pave the way for the rise of a new imperialism" (p. 233).

Professor Schuyler unearthed few new facts for his book and offers no startling interpretations. The critically-minded reviewer will find it hard to satisfy his passion for controversy. This is a scholarly and eminently readable book. It is admirably balanced and, judged on the basis of the restricted scope set by the author, it is beyond cavil. Since the book refrains from following up the ramifications of complicated imperial policies and their gradual revision and liquidation, the main strands of reformist thought stand out more conspicuously and the whole shift in imperialist trends becomes clearer to readers of this book than it appeared to contemporary observers. The book should prove very useful to students.

K. E. Knorr

Stanford University

National Economies

The Structure of Soviet Wages—A Study in Socialist Economy. By Abram Bergson. (Cambridge: Harvard Univ. Press. 1944. Pp. xi, 255, $3.50.)

According to the popular view, socialism presupposes equality of reward. This was, however, certainly not the opinion of Marx. In his criticism of the so-called Gotha program Marx definitely stated that inequality of income would persist in a socialist state, at least in the transitional period. Dr. Bergson confirms this interpretation of Marx by presenting—in the introductory chapter—a brief but lucid description of the essential features of a socialist economy.

In a very thorough systematic analysis which follows Dr. Bergson shows that inequality of income in Soviet Russia resembles to an amazing degree the situation in a capitalist economy. The samples chosen seem to be sufficiently representative at least to demonstrate the great variation in income.

The study deals mainly with the wage statistics for 1928 and 1934 although the trend in the Soviet wage policy up to 1937 is taken into consideration.

The result is striking: the inequality of wages in U.S.S.R. and capitalist countries reveals a uniform pattern. The reason for this similarity is that a socialist administration also must seek to extract as high a value product as possible from resources at its command; in other words, it must try to attain an optimum allocation of given resources (p. 9).

The socialist propaganda was geared to the idea of an absolute abundance and regarded, therefore, equality of reward not only as a prime revolutionary objective, but also as obtainable with certainty once the institutional setup of capitalism was eliminated. Practical experience soon taught the painful lesson of how wrong this interpretation of the unquestionably unprecedented

increase in productivity of modern capitalism has been. After the privation of the various Five-Year Plans and all the hardship of the war, the Russians have fully realized that you cannot have guns and butter at the same time, that the relative scarcity of resources remains the strait-jacket also for the socialist state. Just as with the entrepreneurs in a capitalist economy, the Soviet administrators had no other choice than to differentiate wages according to the contributions of different types of work.

Of particular interest in this respect is Dr. Bergson's comparison of wage variation in the United States in 1904 with that in the Soviet Union in 1928 in special industries, namely, in the glassware industries. These years and these industries have been chosen because the technical conditions of production have been essentially the same in both countries. The inequality in the U.S.S.R. is surprisingly similar to that in the United States. Since 1928 the inequality has considerably increased, particularly under the influence of the Stakhonov movement. The similarity remains great even when allowances are made for all kinds of variations in real wages by special rationing and other government privileges.

The book is an extremely valuable contribution to the ever-growing literature on Soviet Russia. With the well-trained eye of an economic theorist the author during his short stay in Russia has seen more than many observers and writers who have spent many years there. He knows the language and is familiar with the original Russian literature. In sovereign command of the analytical tools of modern economics, as well as of advanced statistical technique, the author was able to present his analysis in the least biased and most enlightening way. The Marshallian economics has certainly a wide range of validity also within a socialist economy, and Dr. Bergson has understood how to draw from it the proper conclusions with regard to fundamental issues of the Soviet economy. His deeper insight in the functioning of a socialist economy has prevented him from distorting the analysis by mixing up pure economic relations with the sociological framework of a socialist economy, as has been so frequently the case in the popular literature. We are in great need of more such monographs on Russia as that of Dr. Bergson to get a more adequate picture of the functioning, and of the accomplishments, as well as limitations, of Soviet Russia.

EUGEN ALTSCHUL

U. S. Tariff Commission

Economic Systems; Post-War Planning

A Price for Peace—The New Europe and World Markets. By ANTONÍN BASCH. Foreword by JAMES T. SHOTWELL. (New York: Columbia Univ. Press. 1945. Pp. xii, 209. $2.50.)

Published before San Francisco and Potsdam laid down the great lines of official post-war policies, sponsored by the Carnegie Endowment for International Peace, prefaced by the valiant writer for realistic and constructive

pacifism, this book carries a message. Concisely stated in the programmatic title it proclaims: Europe ought to be given her opportunity and share in world trade, if the peace is to be durable. Europe in this program means continental Europe, where the peoples after the war will have to start under auspices and conditions different from those of Great Britain and Russia. Out of the ashes, out of the ravages and destructions, a new Europe emerges on the Continent. Security of the world and the well-being of mankind require that this region be swiftly, fully, and planfully integrated in a well-functioning world economy. The New Europe could certainly not be excluded and left to its own severely impaired powers of resilience without preventing the whole world from regaining economic equilibrium.

The European continent—at the pre-war average—absorbed 38 per cent of all world imports and contributed 37 per cent to the total exports of the world; excluding intracontinental European trade, the European continent used to import 57.8 per cent of the total supplies of all other continents plus Great Britain plus Russia and to sell to these countries 44 per cent of all its own exports. Comprising before the war nine highly industrialized countries, the European continent offered the greatest market for raw material and foodstuffs and was seller, as well as buyer, of the largest quotas of all marketed manufactured articles. There is not one exporting or importing area where the whole economy would not be dislocated and forced into grave adjustment trouble should continental Europe not regain—nay, improve—her place in world economics. Failing this, the world could again be driven to the brink of war and catastrophe.

Professor Basch adduces an imposing array of striking facts and figures in corroboration of the plausibility of his vision of a post-war world economy, where the crossroads between universal prosperity and universal misery, between peace and war, will be marked by a signpost pointing in one direction at the integration; in the other, at the exclusion of continental Europe. But, while building up this vision, Basch is no starry-eyed visionary. His prospects are clouded with the awareness of the difficulties and obstacles, which ought to be overcome, and of the sacrifices and self-denying policies which governments and peoples ought to be ready to accept in order to achieve a well-organized, collaborative world economy including post-war continental Europe. Basch does not ignore the fact that not all peoples, not even the peoples of continental Europe, whose very survival is directly involved may now be prepared to adjust their economic policies, domestic and foreign, to this challenge of the future. And it is precisely this painful adjustment, the deliberate choice of long-run policies with all the sacrifices they may entail, in the place of more facile short-run advantages and shortsighted national policies, that Professor Basch, in his message, proclaims as the "price for peace."

The Atlantic Charter, the master agreement of 1942 and, more recently, the presidential proclamation terminating Lend-Lease are indicative of the way the United Nations are pledged to go together to the goal of economic reconstruction; it is the way of multilateral agreements and equalitarian treatment tending toward liberation of trade and removal of trade barriers. But, for continental Europe to be able to participate materially and to benefit from such

a policy of world trade liberation and expansion, emergency measures ought to be taken during a transition period of several years, in order to restore equipment and productivity of the damaged areas.

Dr. Basch suggests that this primary task of rehabilitation should be planfully oriented on the future inclusion of the readjusted countries in a collaborative system of world economy and division of labor following the principle of comparative advantage. And it is here, in his practical advice, not in his postulated aim, where Basch presumably will encounter opposition, disappointment and, eventually, even the surprise of finding the proclaimed ends achieved through other ways and means. It will probably be hard enough to reconcile national economic policies with the principles of equalitarian multilateral trade; the problems of Great Britain and her imperial preference and of the aloofness of Russia and her newly-won sphere of influence against the traditional methods of international relations ought to be brought in line with the great concepts of an expanding world economy.

Tendencies toward bilateral arrangements, regional preference and competing *blocs* will have to be overcome before the great machinery of concerted economic action aiming at an expanding world economy—the pacts concerning raw material and foodstuffs, lowering and abolition of trade barriers, monetary stabilization and the International Bank for Reconstruction and Development—start their beneficial work of trade expansion and integration. The World Security Organization provides an Economic and Social Committee with supervisory and regulative functions, but it would seem to be doubtful whether even such a supreme instance would be able to live up to the requirements as stated by Basch as essential in the task of economic reconstruction. Universal planning in the international sphere and domestic planning, both guided by the principle of comparative advantage, as advocated by Basch, may appear to be a directive rather for creation of a new economic world than for reconstructing a world economy out of more or less adequate, already existing elements. Lack of inexorable logic is certainly not among the failings of Professor Basch's program. To a world hectically industrialized in every corner of the globe—the book cites astonishing developments on this score—Basch proclaims: "Old plants and old and outworn economic enterprises—and even new industries with high production costs—should be scrapped along with old and outworn ways of thinking" (p. 90). But only a doctrinaire—and Dr. Basch is no doctrinaire—could assume any fixed and inflexible rule by which to measure relative advantages and disadvantages, which are neither static nor of a purely economic nature, expressible in costs. The industrialization of former agrarian countries, the agrarianization of predominantly industrial economies—Dr. Basch gives the facts—may from the standpoint of mere costs be wasteful and irrational, but they certainly are not without good reason. And the planners, who according to Dr. Basch should be entitled to determine the structural set-up of the economic world, which under our eyes has so dynamically changed its structure of production, may well be faced with a task of almost unbearable responsibility.

"The first thing—and this should be done immediately—is to make an itemized census of the world's manufacturing capacity by countries, showing the

development of individual industries during the last decade and their potential market. Special committees for each industry, established as an international organization, should examine the situation in all possible details" (p. 90). Granting that there is some preparatory work of this kind already done—for example, the U. S. Census and studies in the Foreign Economic Administration—could the dynamic economic development of the world wait for these committees to take stock and issue their plans? And would these plans correspond to more than a momentary phase, thus barring further progress?

The planners, moreover, would have to choose between different schools of thought regarding the impact of industrialization on the expansion of international trade. Some, such as Professor Eugene Staley and Louis Bean, expect that industrial diversification intensifies foreign trade and advocate that industrially less developed regions and backward countries be assisted in their endeavors to industrialize and thus develop not only a higher standard of living, but also more receptive markets. Others, however—Professor Basch quotes the interesting findings of A. J. Brown—are not so sure of such an effect in the long run. There are similar problems to solve with regard to agriculture, notably in the European southeast.

What lead are the global planners to follow? It would seem as if the realistic approach intended by Basch has overlooked one very realistic, though not dirigible and not measurable force of resilience and adjustment, namely, the *élan vital* of millions of skillful, enterprising, intelligent individuals, who may be expected to strive for survival according to their own lights and determination and following the selective decisions of the market, where they would find guidance even in the task of assessing comparative advantages and disadvantages, at least in all fields of production and trade which will not fall into the widening sector of direct governmental regulations.

The lot of world planners would certainly not be enviable. The world is full of contradictions. A new, the "second industrial revolution," has radically changed all economic structures. The war and revolutions have changed the social structure in wide parts of the world, including continental Europe. New economic and social philosophies gain sway over half of continental Europe and of the British Isles. The tendency toward industrialization is partly—for obvious political reasons—offset by the imposed reductions of industrial activities in Germany, regardless of comparative advantages. Still the fact remains that continental Europe, for her own good and for the peace of the world, ought to find her place in a well-organized world economy. Assuming that the urgently needed emergency measures succeed in bringing about rehabilitation of productive capacities in the afflicted areas of the world, and allowing for collective activities within a wide sector of economics, a machinery is already prepared—and a universal intention is agreed upon—to liberate trade and to release the dynamic forces of individual economic enterprise, even in stricken continental Europe, the last place in the world where the human urge and force of resilience should be completely superseded by the rulings of a planning board, be it ever so omniscient and wise.

Dr. Basch has contributed a very meritorious study to the literature which, in its entirety, adds up to an organized public opinion and clear vision con-

cerning the future of a world bent upon the preservation of civilization and peace. Isolationists should read it in order to abandon their easy belief in the possibility of severing interdependencies which are organic, and illusionists and perfectionists should read it in order to get a glimpse of the complexities of a task which can not be done merely with good intentions and which, moreover, can never, even with the greatest exertions, yield fully satisfactory results in the short run.

ADOLPH B. DRUCKER

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Collected Works. Vol. XXIII, 1918-1919. By V. I. LENIN. Edited by A. TRACHTENBERG. (New York: Internat. Publishers. 1945. Pp. 539. $3.50.)

The volume before us contains Lenin's writings and speeches for the period May, 1918, to February, 1919. With the exception of "The Proletarian Revolution and the Renegade Kautsky,"[1] which first appeared in pamphlet form, the items are short and consist of speeches[2] and letters to official and unofficial bodies, together with a number of contributions to Pravda. While Lenin addresses himself throughout to pressing practical problems of the day, the volume, nevertheless, throws light on a number of issues which cluster around the interpretation of the Russian revolution.

One thing emerges clearly. The Bolshevik revolution was begun as the first stage of a world revolution of which the German phase was conceived to be of strategic importance. "Our revolution was begun as a general revolution."[3] "Final victory is possible only on a world scale."[4] The "complete triumph of the Socialist revolution is inconceivable in one country alone and demands the most active collaboration at least of several advanced countries, among whose number Russia cannot be counted."[5] From "the stand-point of the international, of the world revolution . . . the chief link . . . is Germany. . . . the German revolution is already ripe and on it the success of the world revolution will most of all depend."[6]

On October 3, 1918, Lenin observes, "The crisis in Germany has only begun.[7] It will inevitably end in the transfer of political power to the German proletariat. . . . the Bolsheviks were right in basing their whole tactics on the support of a world workers' revolution."[8] Kautsky, in fact, upbraids the Bolsheviks for having "staked everything on one card, on a general European revolution" at a "*definite date.*"[9] Lenin's response throws light on the follow-

[1] Pp. 347-436.

[2] In some cases, newspaper accounts of speeches.

[3] Aug. 23, 1918; p. 206. See also pp. 27, 48, 307, 405-07.

[4] May 14, 1918; p. 22.

[5] Nov. 18, 1918; p. 275. See also pp. 126, 206-07.

[6] Oct. 22, 1918; p. 251. See also pp. 439, 489.

[7] "Within ten days . . . the German monarchy was overthrown." Ed. note, p. 403 n.

[8] P. 228.

[9] P. 401. Italics mine.

ing two issues: (1) the alleged determinism of Marxian theory and (2) the alleged non-Marxian character of the Bolshevik revolution.

Lenin's assertion that Bolshevik tactics were "based on the expectation of a European revolution in the more or less early future, but not at a definite date"[10] is in itself of no particular interest. The world revolution did not transpire in the "more or less early future." What is of interest is Lenin's position that to predict a definite date for a revolution is, in principle, impossible. Why? Because there are no "historical laws of revolution. . . . laws only apply to the typical, to what Marx once termed the 'ideal,' meaning average, typical capitalism."[11]

Lenin is correct as to Marx's view of the relation between his theory and historical prediction. As Lenin indicates, the reference of Marx's "laws of motion of capitalism" is a theoretical model of an ideal, typical capitalism, and not the historical scene. For the purpose of historical prevision, *i.e.*, prediction in terms of time and place, the model needs to be adapted to the peculiarities of the given historical configuration; and even then, what emerges is a probability judgment. Critics of Karl Marx have mistaken revolutionary rhetoric for a doctrinal and methodological determinism.

As for the alleged anti-Marxian character of the Bolshevik revolution, Lenin has the following to say: "Long before the war, all Marxists, all Socialists, were agreed that a European war would create a revolutionary situation. Kautsky himself, before he became a renegade, clearly and definitely admitted this—in 1902 (in his *Social Revolution*) and in 1909 (in his *Road to Power*). It was also admitted in the name of the entire Second International in the Basle Manifesto."[12] Lenin might have added the great authority of Engels in support of his position that the conception that a world war would breed world revolution[13] had come to be a Marxist tenet.

"The experience of every revolution that has hitherto occurred in Europe offers striking corroboration of the fact that revolution is inevitably doomed if the *peasants* do not throw off the domination of the kulaks."[14] Had Lenin not been making a speech to the delegates of the poor peasants, he might have said, "If the *revolution* does not throw off the domination of the kulaks" —a domination based in considerable part on the circumstance that the kulaks were the main source of the surplus grain for the feeding of the urban population. The kulaks' propensity to hoard the surplus led, beginning with the early summer of 1918, to the organization of class warfare in the village under the slogan "Poor peasants, unite!"[15]—against the kulaks.

In this way, according to Lenin, "the October Revolution of the cities became a real October Revolution in the countryside only in the summer and autumn of 1918."[16] Toward the end of 1918, he asserted that the latter was

[10] P. 402.

[11] P. 356.

[12] Pp. 402-3.

[13] See *e.g.*, pp. 119-20 for quotation from Engels to this effect.

[14] P. 293. Italics mine.

[15] June 4, 1918; p. 273.

[16] Nov. 6, 1918; p. 264.

possessed of a "significance . . . incomparably deeper and greater" than that of the October revolution in the city.[17] Lenin overestimated the significance of his rural revolution because he underestimated the staying power of the kulaks. Their surplus grain might be requisitioned by force, but force does not avail for the production of surplus grain as long as production is in private hands. Confronted by serious famine in 1921, Lenin was forced to inaugurate the N. E. P. of which the kulaks were the chief beneficiaries.

It may be that their very success contributed to the kulaks' premature and violent liquidation. At any rate, while Lenin remarks, "We shall have to fight for the social cultivation of the land," the following indicates that he did not envisage so rapid and forcible a collectivization of agriculture as ultimately took place. "We fully realize that such vast upheavals in the lives of tens of millions of people as the transition from small individual peasant farming to the social cultivation of the land, affecting as they do the most profound roots of life and habits, can be accomplished only by prolonged effort, and can in general be accomplished only when necessity compels people to reshape their whole lives."[18]

Lenin also expresses himself at length on the highly controverted issue of the dictatorship of the proletariat. But that is too complicated a matter for summing up within the limits of a short review.

LEO ROGIN

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Economic Democracy and Private Enterprise. By MICHAEL O'SHAUGHNESSY. (New York: Harper. 1945. Pp. x, 118. $2.00.)

The jacket of this book carries the endorsements of Secretary Henry A. Wallace and Philip Murray. Such endorsements must have rested upon its equalitarian social and political sentiments, certainly not upon its meager economic or political analysis. Apparently directed primarily at the lay reader, the book is, by and large, based on the economics of the heart, not of the head.

The economic thesis (Chaps. I and II) is simple. During the war, we attained full employment "for the first time in our history" by tremendous government spending. To maintain full employment in the post-war period, despite the curtailment of wartime government spending, it will be necessary to raise the minimum income per family to $2,800 per year. Family units with incomes of less than $1,500 would be raised to this level by school lunches, stamp plans, housing assistance and medical care through income taxes on those with incomes greater than $5,000 and on corporations. This would "create a prosperity" enabling those in the $1,500-$3,000 class to raise their own standards to the $2,800 minimum. Those contributing the taxes would suffer no deterioration in their financial position "and their gain in stability would more than compensate for their temporary sacrifice." Eventu-

[17] Dec. 14, 1918; p. 447.
[18] Pp. 448, 449.

ally, investment of savings for production purposes would largely come from those with incomes below $5,000. "Social security taxes, health and educational grants in aid and all forms of Federal paternalism would eventually be unnecessary" if the $2,800 minimum were maintained.

Even if one admits that, for the most part, industrial leaders have emphasized wage rates as a cost almost to the exclusion of wage rates as purchasing power, O'Shaughnessy goes to the opposite extreme. "The higher the wage level, within reason, the greater is purchasing power and consequently consumption, and the higher consumption the higher employment." The relation of wage rates to labor productivity, costs, prices and profits is completely ignored. It is perhaps significant that the author always states his minimum goal in monetary terms, but nowhere comes to grips with the *real*-income problem, merely piously inviting the nation's industrial leaders to double the 1942 production of civilian goods for the same total profit earned in that year. So foreign is productivity to his thinking that he fails to invoke what is perhaps the soundest argument in favor of raising the minimum standards of health, nutrition, housing, and education for our lower-income groups. This argument is that such measures would raise human productivity and foster that mobility of our human resources so necessary to maximize our national real income. Only upon such a basis, by which the product available for redistribution could be steadily increased, could his drastic leveling process have any degree of permanence whatsoever, particularly without continuing federal "paternalism" which he himself wishes to eliminate.

Like so many "liberals" of the Christian-humanist (or socialist) persuasion, O'Shaughnessy finds something ethically distasteful about "competition" and "profits." He criticizes our present economic system *not* because it fails to attain the "competitive" ideal, but because competition (particularly on a price basis) is itself "socially destructive," creating monopoly and concentration of power and wealth. For competition, he would substitute (consumer) coöperation, "production for use and secondarily but definitely for profit," and "a fifty-fifty attitude as between self-interest and public welfare." Beyond such confused and vague ethical notions, he fails to support his view that "there are better means" to insure the "passing on to the consumer the gains from technological advance" than through price competition. Strangely enough, he later fully quotes with approval the patron saint of this economic philosophy, Henry Ford.

After this highly inadequate discussion of fiscal and economic matters, O'Shaughnessy spends the remaining three-quarters of the volume in discussing the political means of implementing his economic program. Actually, there is no necessary connection between the two parts, the latter being a partisan but, on the whole, competent criticism of pressure-group control of Congress, particularly during the war just ended. The solution which he offers for this vital problem is "functional democracy." He proposes the creation of a Supreme Council of Industries and Professions (S.C.I.P.). Delegates, chosen by democratic procedure, would represent organizations of owners and managers, workers, and consumers in each major industrial or vocational

group or subgroup of the national economy. The S.C.I.P. would have official status as an integral part of the government, acting as an advisory body to the Congress, executive departments and various commissions. This Council could (1) pass resolutions, by majority vote, expressing the opinion and advice of the delegates on current problems; and (2) reach agreements—for example, between employers and employees with the assent of consumers' delegates—valid only if then incorporated into acts of Congress. Congress could then "recover its composure as a deliberative body," considering proposals from S.C.I.P. "in an atmosphere of calm, free from outside pressure, and devote its time to acting conclusively on matters of broad policy." Harmony between branches of government and between classes would thereby be restored and the pressure-group problem would be resolved. And a "just balance" among production and consumption, employment, prices, wages and profits would be attained to form the basis of legislation.

O'Shaughnessy's proposal deserves careful consideration, since it does conform with the tendency of certain organized groups of citizens to think, lobby and vote more nearly as "producers" than as "consumers." But what the author fails to recognize is that our organized pressure groups actually represent primarily the "aristocracies" of agriculture, labor and industry. For example, the three million farm families—the half largely outside of commercial agriculture—are not represented by any articulate group. The same is true for millions of unskilled, unorganized workers. In their present state of education, physical health and mental vigor, they cannot be expected to organize politically nor is it feasible successfully to impose organization upon them from the top down. Nevertheless, many of them can and do vote and participate in the existing political process. Functional representation would, therefore, shift the balance of power still more strongly in favor of the "aristocracies"—to the detriment of the very groups which O'Shaughnessy wants most to strengthen—than does present more broadly-based Congressional representation.

Furthermore, it is politically dangerous to encourage and extend producer-mindedness by legalizing it. Would not economic positions tend to become less, not more reconcilable? The one-third representation of consumer interests would very probably be "window-dressing," if past experience is any guide. By rejecting competition *in toto,* O'Shaughnessy would transfer price and wage making almost wholly into the political arena. The S.C.I.P. is strangely reminiscent of the National Council of Corporations of Fascist Italy. To suggest that such a large and unwieldy organization—however "democratically" organized—could lighten the strong hand of the state is little short of naïve. In the reviewer's opinion, creating a more intelligent electorate, broadening the franchise, and Congressional reform—even marked revisions of our Constitution—should be attempted before we resign ourselves to the neo-medieval "status" society which appears to be the author's ideal.

This is not a good book in any scholarly sense. It is impassioned, partisan, replete with repetitive *clichés,* and inextricably confused as between ends and means. The reviewer nevertheless would recommend it particularly to economists writing in the fields of employment and fiscal policy as an

example of how not to write what some of them are, in fact, writing. Economists cannot, in times like these, avoid questions of public policy, political philosophy and social "values." But they can, at least, try to separate assertion and analysis. They can make their fundamental assumptions concerning the institutional framework and the ends of society as explicit as possible, in order that critical attention may be focused on the crucial issues. And they can show far more humility, and far less acceptance of theoretical hypotheses as proven "facts." Only thus can they avoid envelopment by the ceaseless clash of the ideologies and utopias.

WILLIAM H. NICHOLLS

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Citizens for a New World. Edited by ERLING M. HUNT. (Washington: Nat. Counc. for the Soc. Stud. 1944. Pp. 186. $2.00.)

For its Fourteenth Yearbook, the National Council for the Social Studies has brought together eight papers bearing on the need of an organized world society and the responsibilities of citizenship in that society. "No nation," in the words of the Preface, "can make an independent choice between peace and war, or by its own efforts guarantee its prosperity against depression, or its democracy against the menace of fascism." Hence the purpose of the symposium is "to describe needs and a range of proposals, and aid citizens in making intelligent choices as they help determine our policies in rebuilding an orderly society." Notwithstanding the sponsorship of the volume by leaders of educational foundations and peace organizations, the promise of the Preface is not fulfilled in the material presented.

Written in 1944, the volume opens with a review of the case for planning the peace during the war by Professor Clyde Eagleton. He shows why only a strong international organization can be expected to cope with the problems of restoring order, maintaining security, and preventing the imbalances that lead to war. The same theme is developed by Professor Linden A. Mander in his paper on "The Interdependence of Nations and Individuals," and in Miss Esther Caukin Brunauer's chapter on "The Stake of the United States in International Organization."

Under the heading, "Plans for International Organization," Professor Denna F. Fleming traces our negative contributions in respect to the League of Nations, the World Court, and the episodes of Manchuria, Ethiopia, and Munich. He is strongly opposed to the treaty veto power of the Senate. In his words, "The stronghold of a constantly recruited battalion of death upon our foreign affairs must be ended." When the competent representatives of the participating nations have finally reached an international agreement after much compromise and discussion, Professor Fleming regards it absurd that any one parliament should then proceed to "perfect each treaty for all time to come against all imaginable hypothetical dangers and against all the frailties of future human beings."

The subject of "Education for a New World Order" is covered by Professor Walter M. Kotschnig. He presents the dilemna of avoiding the use of

education as a political weapon of dictatorship, and at the same time implementing the positive function of education as a preparation for citizenship in a world order. Professor Kotschnig emphasizes the key position of the secondary schools in international education. He would put greater emphasis on foreign languages; and in all subjects, "even arithmetic," there should be a judicious choice of examples and problems designed to help create an international outlook. He would not interfere with the cultural integrity of the individual nation; and he wants no "world curriculum." He does, however, recommend an international office of education available to appraise educational systems of individual countries and to offer aid where needed.

Reference to the importance of economic coöperation in building a world order is encountered in all of the papers. Only one chapter, however, is devoted specifically to treatment of the economic problems that must be resolved at the international level. That one is by Miss Carol Riegelman, under the title, "Liquidating the War: Economic and Social Rehabilitation." Her approach is not that of the economic analyst. Miss Riegelman is content to list the general welfare aims of economic coöperation. Thus, we are admonished that it will be necessary to find jobs for all who need them; to find homes for uprooted populations; to advance backward areas; to make farming profitable; to establish freedom from want. There is no effort to point out the conflict of issues that must be resolved in such basic fields, for example, as monetary stabilization; balancing imports and exports; cartels and commodity quotas; accelerating the international flow of investment funds; the exchange of goods and services between privately managed and state-controlled economies. Apparently Miss Riegelman's faith in international conferences remains strong. She closes her chapter with this peroration on the International Labor Conference held in Philadelphia in April, 1944: "The Philadelphia Conference debates may thus give a new impetus to international planning for social and economic reconstruction. The Conference may mark the opening of a new phase in the struggle to achieve a better post-war world."

An exception may be noted to the generally platitudinous tone of the volume. It is in the shortest of the chapters—a 5-page paper on "Problems of International Health," in which C. E. A. Winslow presents a check list of the essential health services in which international effort must be concentrated for protection against the spread of diseases and for the raising of health standards among nations.

It is difficult to ascertain for what type of reader the volume was designed. Two editions are mentioned in the Foreword: "one for the general public; one for teachers of history, international relations, and related fields of the social studies, and for other educators concerned with the planning of the school curriculum." But only one edition has actually been issued—apparently the one intended for the general public, with an appendix chapter containing the outline prepared by Professor Hilda M. Watters for a secondary school curriculum in international relations. The volume is likely to prove most useful to the teacher who does his classroom work in other fields but is interested

in obtaining a general knowledge of the ground covered by the field of international education.

A. D. H. KAPLAN

Washington, D.C.

National Budgets for Full Employment. Pamph. ser. nos. 43-44. (Washington: Nat. Planning Assoc. 1945. Pp. viii, 96. 50c.)

This study investigates the relationships between public expenditure, private investment and consumption, implied by the employment of 60 million persons in the United States in the year 1950. Assuming an annual increase in output per worker of 2 per cent during the current decade, and granted that the work week is not reduced below forty hours, the authors calculate that this labor force is capable of producing in 1950 a gross national product of around 170 billion dollars (1941 prices). They further calculate that, even if taxes are reduced, if the Social Security fund fails to accumulate, and if less corporate profits are placed to reserve than of late, such a level of gross national product implies—on the basis of past relationships—a deflationary gap of the order of 8 to 9 billion dollars. This pessimistic conclusion, with which few would quarrel, leads the authors to consider (1) deficit financing, (2) increased private investment, and (3) increased consumption as alternative means of achieving full employment. No elaborate consideration is given to the strategy required by different lines of attack, but the problem is clearly posed.

The composition of full employment output and the associated distribution of the labor force are treated only incidentally. For example, one may question whether as many as 15 million persons can ever again be employed in manufacturing, even under assumption (2). However that may be, the study does much to document the conclusion "that past relationships will not bring nor maintain . . . full employment," and "that changes in our past arrangements are therefore necessary." The formulation of specific measures is left for further study, though it is admitted that this is a task which brooks but brief delay. In fine, the monograph is clearly written and provides an excellent introduction in concrete terms to national income and national product accounting, although the theoretical treatment is necessarily sketchy.

HAROLD BARGER

Washington, D.C.

The Second Chance: America and The Peace. Edited by JOHN B. WHITTON. (Princeton: Princeton Univ. Press. 1944. Pp. vi, 235. $2.50.)

The little volume contains seven essays on the structure of the peace, contributed by members of the Princeton faculty and the Princeton Group for the Study of Post-war International Problems. Papers on the political, legal, economic and philosophical aspects of post-war relations are included. While the treatment is rather sketchy, the chapters move along swiftly and make for stimulating reading.

Most interesting to the reviewer was Professor Niemeyer's chapter on

"World Order and the Great Powers," where it is argued persuasively that post-war peace will depend not on legal procedure but on the "art of adjustment" as practiced among the great powers. Events have somewhat overtaken Professor Corwin's plea that constitutional practice does not require a two-thirds Senate majority for ratification of a peace organization, but the argument may regain importance at some later time.

Professor Graham's chapter on "Economics and Peace" is the only one dealing with the economic aspects of the problem. The lesson of the last century, he argues correctly, is that we cannot get peace through liberal economic policies, but that we may get liberal economic policies through peace. The attainment of peace, first of all, will require full employment in the major countries, a condition upon which international trade *per se* is thought to have little bearing. Further requirements are free access to raw materials for all nations on equal terms, checking of international monopolies, stability in the tariff structure and an orderly international monetary system. Voluntary stabilization of exchange rates and price levels is recommended, with monetary standards being linked to goods on a stable basis, in short, application of Professor Graham's commodity money scheme to the international sphere.

RICHARD A. MUSGRAVE

Washington, D.C.

Here Comes Tomorrow. By A. W. ZELOMEK. (New York: Ziff-Davis. 1944. Pp. xi, 131. $2.00.)

The style of present-day economic advisory services to business men embodies three principles: (1) be prophetic, clothing uncertainty with a little vagueness if necessary; (2) be brief; (3) make the analysis simple, even if this requires superficiality. Mr. Zelomek's little book on the post-war decade suffers from possessing these three characteristics. In 127 small pages he discusses ten topics ranging from international relief and post-war prices, income, and employment to the prospects for moderate-cost housing and the outlook for competing types of transportation.

Economists who have given thought to post-war conditions will find that the book does not add to their knowledge or understanding; but the judgments expressed, where definite, seem sound to the reviewer, and the layman should find the brief discussions useful.

EVERETT E. HAGEN

Washington, D.C.

Statistical Methods; Econometrics; Economic Mathematics; Accounting

Elementary Statistics: with General Applications. By MORRIS BLAIR. (New York: Holt. 1944. Pp. xiv, 690. $3.50.)

Fundamentals of the Theory of Statistics. Vol. I. *Elementary Statistics and Applications.* Vol. II. *Sampling Statistics and Applications.* By JAMES

G. SMITH and ACHESON J. DUNCAN. (New York: McGraw-Hill. 1945. Pp. x, 720; xii, 498. $4.00 each.)

The interregnum of the war period has given an opportunity for college faculties to reëxamine their teaching programs, and college catalogues soon will reflect the changes this critical thinking has brought about. Attention is turning to what it is the college-trained man should have gained during his college years, and on this touchstone the various college courses must be judged. In such a test, how does college instruction in "statistics" fare? Two elements of the problem seem to have developed.

In most institutions statistics has become for many course programs a basic course, in large part in recognition of the prominent rôle played by factual information in business, science, government, politics. There has been a tremendous increase in the compilation and use of statistical information in this country in a day in which "full employment" and "gross national product" are familiar terms. The challenge to the colleges is whether or not their instruction is preparing graduates in the best ways possible to enter this environment. Much of the burden of the training in ability to get meaning from figures rests on the "statistics" courses, though it is not the title but the subject matter and the instruction that are important.

At the same time that colleges are being called upon to combat the entering freshman's distaste for figures and to develop his skills in their interpretation and use, the colleges also are expected to train some students to be firmly grounded in the advancing techniques of specialized statistics. The two instruction purposes should not be merged, even partially, for the purposes of the instruction are fundamentally different. The two books under review illustrate, basically, approaches to these two instructional problems.

Blair's text, according to his friendly aside to the student, is not intended to develop embryo statisticians; it is written from "the standpoint of consumption rather than with a view to creation." Yet it remains a textbook of statistics methodology and not a textbook for training in the skills of using figures—the skills so lacking in entering college students and often so poorly developed when they leave. As yet there is no textbook addressed four-square to this special problem and probably will not be until bold curriculum planning shall reveal its urgent need.

For the most part the Blair book follows the organization of the typical textbook in statistics. The first section contains a short, usable discussion of use of numbers, a review of elementary arithmetic and algebraic operations, a good summary chapter on use of ratios and percentages followed by a survey of sources of information and of the problems of compiling material, and a discussion of tabular and graphic presentation. The text is set at a rather simple level.

Section II, Analysis of Large Samples, has the usual description of methods of computation of various measures pertaining to frequency distributions. The presentation is elementary and straightforward. For the curious student the text will have shortcomings at many points, for little is said about the reasons for or origins of the various measures. Included in this section is the problem of curve fitting, introduced interestingly enough not with respect to time

series but as a correlation problem. Here also is a chapter on ways of organizing data into tables for analytic purposes, and finally an elementary discussion of the normal curve and its application to statistical work.

Section III, Analysis of Time Series, describes the familiar procedure of analyzing trends, seasonals and residual cyclical fluctuations, supplemented by several pages devoted to the Mitchell-Burns method of cyclical measurement. Index numbers are covered briefly. Section IV treats of small samples and includes a discussion of analysis of variance and covariance patterned after Snedecor. The student is taken somewhat deeper into this area than he is in the early sections of the book. Section V is devoted to curvilinear and multiple correlation. An interesting addition is an appendix of technical terms referred to in the text.

There is much to commend the Blair text to one in charge of an elementary statistics course intended to carry the student part-way along technical statistical lines. Indeed there are some sections for students who are not interested in statistical procedures as such. The text suffers often in that many of the measures are presented without much discussion of their use or purpose with the result that, unless the instructor is careful, the student will be given a diet of smörgåsbord. However, by careful selection and supplemental work, the text should prove useful, particularly in view of the excellent review questions and exercises that are included at the end of each chapter.

The two-volume book of Smith and Duncan is primarily what its title suggests: a book devoted to the theory of statistics. As such it is not intended for any "consumer" of statistics, but for the student of statistical method, particularly as related to all the problems stemming from frequency distribution analysis. The other areas typically covered in a statistics course are included but often in such a form as to suggest that they hold no great interest for the authors. This observation is not meant to detract from the general excellence of the book but rather better to characterize it.

It is the intention of the authors that Volume I would be used in a first course, Volume II, in a second course devoted to more advanced study. In Volume I will be found therefore the general introductory materials, elementary frequency distribution analysis, correlation and time series analysis, leaving to Volume II a further development of the general theory of frequency curves and the theory of random sampling. First a few comments on Volume I.

The point of departure is variation, first "static variation," then "dynamic variation," *i.e.,* time series. On this note the authors build their analysis. As they claim, considerable care was taken to make sure that the logical exposition does not set too rapid a pace. The more difficult topics are delayed in their treatment even when logical arrangement might suggest their being handled earlier, yet all done with sufficient skill that the parts are smoothly blended into a clean and consistent progression. The book abounds with useful footnote cross references to specific pages, and if the decision to use a pedagogical rather than a logical outline is the reason for this happy practice, the by-product was of unforeseen value.

The book has a forbidding appearance, for considerable experience in mathe-

matics would seem to be a prerequisite to its classroom use. Actually, the authors avoid complete mathematical demonstration of all points and frequently beg a question as being beyond the scope of the text, and probably wisely so. Whether the book is feasible as a general text will be revealed by classroom experience; in this reviewer's opinion there is no reason for students expecting to concentrate in statistical work to find it prohibitively difficult.

Correlation is developed from Pearson's product moment approach in a section characteristically entitled "Study of Bivariates and Multivariates." As a teaching device it may be questioned whether this method is as efficient as the variance approach, although it is well presented here and leads smoothly into the general discussion. The analysis of time series section is notable for its discussion of rational and for its strong section on fitting of trends, which includes a welcome chapter on orthagonal polynomials. Treatment of seasonal variation is less thorough despite the wide use of the technique. In this section, as well as throughout the book, there are interesting notes on the historical background of the techniques under discussion.

The second volume is a welcome statement, in what is for the most part nontechnical form, of the theory of frequency curves and random sampling. Its focus is on the theory, and that theory is built up step by step with considerable skill. While there is little that is new in the book, it is valuable to have its systematic presentation of material hitherto found in rather scattered form. That the book is designed as a teaching vehicle is evident in the pains that have been spent upon orderly development of ideas. Use is made of the technique of setting up a mathematical model and subsequently relating the model to actual experience situations. The mathematics burden is somewhat heavier in this second volume than in the first and the practice is followed of inserting mathematical appendices to chapters where they seem to be desirable. Extensive appendix material is included covering basic needs.

Briefly, the second volume covers the following topics: (a) generalized systems of frequency curves, (b) the theory of random sampling, particularly from normal populations both discrete and continuous, (c) advanced sampling problems covering problems of discrete manifold populations, sampling fluctuations in regression statistics, analysis of variance and problems of non-normality. It will be disappointing to the general student that the authors give relatively little attention to the technique of the analysis variance. Though this approach is covered, ramifications are not developed, nor are there many practical illustrations of its use.

This relatively slight treatment of analysis of variance and the meager mention of the problem of design of experiment give something of a clue to the character of the book under review. It is not a practitioner's book in the sense, for example, that Snedecor's book is. Illustrative examples for the most part are the familiar problems of age or grades of college students, or the more or less classic problem of the life of electric light bulbs. The approach is theoretical and attention is paid to the systematic development of the theory rather than to the exploration of solutions to practical research problems. Yet it must not be thought that Smith and Duncan have failed to provide an

excellent book. They have without question given us a usable textbook for the orderly development of the theory of sampling. The student who goes through a course using this text will have firm grounding and much of the background necessary for the understanding of current sampling procedures, at least so far as they rest on random sampling; but for modifications of these procedures or for the practical background of research work, the student must expect to look elsewhere.

To return to the thought expressed in the opening paragraphs, training in statistics must be focused in the light of purpose. If this reviewer is correct in believing that the basic curricular purpose behind most elementary statistics instruction today is not a desire to develop a knowledge of statistical methodology but to develop skills in the imaginative use of figures, then no textbook is satisfactory which concentrates solely on the ramifications of technique. But where the intent is to provide instruction for the purpose of training a man in research procedures based on statistical techniques, an entirely different type of textbook is called for. In such a program of instruction the Smith and Duncan book might well find a place.

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Business Cycles and Fluctuations

Prosperity, We Can Have It If We Want It. By MURRAY SHIELDS and DONALD WOODWARD. (New York: McGraw-Hill. 1945. Pp. vii, 190. $2.00.)

The general argument of this book is that prosperity, "which almost everyone will grant is essential" (p. 110), does not mean full employment or high national income (p. 111), but "profitable and expanding business" (p. 113). To get it and keep it, we must "go back to the common-sense mechanics of economic progress" (p. 118). We must let interest rates rise to encourage savings, reduce taxes on corporate and personal incomes to encourage investment, remove restrictions on security market operations, cut public expenditures to the bone, reduce the national debt over the cycle as a whole, recognize the superior efficiency of big business, abolish limitations on provision for depreciation, obsolescence and reserves, remove controls of production, consumption and prices, allow rents to rise, avoid credit-fed booms, have a balanced foreign trade.

The support of this argument consists of an admixture of truth with sweeping statements having no analytical or empirical support, misrepresentations, and factual or analytical errors. It is flatly declared, for example, that freedom has been attained only "in the greatest Grecian age" and in the 19th century "in parts of the so-called Western World" (p. 17); that the United States has given its people a "fairer deal" than any country on earth (p. 64); that government charity (public works) involves a loss of political freedom (p. 100); that the "miracle" of war production in the United States was in no way due to government or to labor, but was due to business management in corporations, financial institutions and on farms (pp. 119-20).

In other cases, a little analytical support for the argument is provided, but it is very often wrong. For example, deficit-finance is opposed because it means "high taxes for all" (pp. 16, 81). The authors do not discuss the arguments on this point of Lerner, Domar, *et al.*—in fact, they do not mention any literature specifically. Surely it has been made clear enough by now that deficit-finance means higher taxes only under certain conditions, and that these conditions would usually be such that no deficit-finance is required; and that under *no* conditions must deficits lead inevitably to higher taxes for everyone. Similarly, the authors argue that low interest rates result in inflation (p. 31), that saving in the United States has been made "dangerously unattractive" by low interest rates and high taxes, and that the United States has too little "savings and capital formation" (pp. 57, 80). Throughout, there is an implication that there is a natural tendency for all income that people and firms want to save to be invested, at any level of income—that is, that there is a natural tendency toward full employment equilibrium. Can the whole Keynes-Hansen literature be summarily dismissed in this manner?

It is even stated that the money which "public spenders" previously planned to spend to maintain full employment has "*already been spent*" (authors' italics) for the war (p. 99). This statement is, perhaps, hardly an analytical error. It is of a piece with "passing the cost of war to future generations through borrowing." One might as well argue that because the nation spent a lot for consumption in the 1920's, it cannot spend more in the 1940's.

The authors conclude that the solution to unemployment is private investment (p. 154). If any single point has emerged from recent discussion of income and employment, it is that the solution to unemployment is spending—for public investment, public consumption, private investment and private consumption. Private investment has no special advantage for creating employment, and as Kalecki and others have shown, it has one major disadvantage: every time private investment is stimulated by any means other than an increase in the marginal efficiency of capital, there is a tendency for the rate of profit to fall. Trust or insurance companies, it is true, may benefit less from a high level of consumer spending than from a high level of savings and private investment.

In cases where empirical evidence is adduced to support the authors' arguments, the conclusion is sometimes far from clear. They argue, for example, that deficit-financed government spending in the 1930's did not stimulate spending, but rather frightened it off (pp. 98-99). In fact, national income rose about three times as much as national debt in 1933-37, and the authors' statement cannot be supported empirically. The authors also state that in the past, we have had "prosperity interrupted infrequently by brief periods of adjustment" (p. 112). Even with the authors' definition of prosperity, the statement is doubtful. If prosperity is "full employment," and surely to most people it is, then the statement is patently false. Over the whole century 1825-1929, full employment was a rarity.

While no specific literature is cited, there is a tendency here and there to misrepresent well-known arguments of other economists. According to the

authors, the statement is sometimes made that the public debt is not important (p. 12). Some readers may be inclined to think of Hansen and others in connection with this statement. In fact, however, no economist ever said that the public debt was ***unimportant;*** they have only said that a public debt is not a crushing burden, that it does not mean national bankruptcy, and so forth. Again, the authors claim that the "mature economy" thesis says that the economy already has all the buildings, roads, equipment, and housing that it needs (p. 56). A statement more completely in contradiction with what Hansen and others have said could hardly be imagined.

Similarly, the book states that taxes take income from those who earn it and give it to others; and that government service is the one item of compulsory consumption (p. 53). The nuances here are quite unjustified, implying as they do that people deriving income from government expenditure do not earn it, that all other income *is* earned, and that the people have no control over government outlays. The argument that income should be redistributed to raise the propensity to consume, according to the authors, "really means that the government should kick in the teeth anyone who had learned to do a good job and anyone who had acquired enough wealth for others to use" (p. 85). As Lerner has made clear, redistributing income need not mean taking income away from anyone; it means only that *increases* in income must be reserved mainly for those in the lower brackets. In any case, the implication that everyone deserves whatever income he has is quite unjustified. The statement that "government charity" (public works) means loss of political freedom (p. 100) should have been supported; or, it should be added that pressure by employers on the political activity of their employees is not unknown. To a Canadian (and no doubt to an Englishman or an Australian) the remark that the present rate of personal income tax progression in the United States is "plainly dishonest" (p. 150) sounds a little strange, since the effective American rates are very much lower in the middle brackets, and somewhat lower even in the top brackets, than the Australian, Canadian, and British, and no substantial relief is expected in Australia, Britain, or Canada for some time to come.[1]

In short, the book is less a solid piece of economic analysis than a political pamphlet, apparently designed to help restore to big business the power, prestige, and profits it enjoyed in the 1920's. The book takes on an importance disproportionate to the weight of its arguments, however, because Messrs. Shields and Woodward, respectively Economist to the Irving Trust Co. and Research Assistant to the President of the Mutual Life insurance Co., not only proclaim their status as professional economists to lend authority to their views, but label all those who disagree with them amateurs, incompetents, ignoramuses, malcontents, and—significantly—do-gooders. It seems safe to guess that the dissenting group thus described will contain the bulk of professional economists.

[1] Since this sentence was written, all four countries have reduced their income tax rates. The flat rate reductions of 10, 12 and 16 per cent in the United Kingdom, Australia and Canada are somewhat more generous to taxpayers in the very high income brackets than the American reduction.

As the authors themselves point out, "The trouble with economic panaceas is that they can be made to have some degree of plausibility" (p. 69). The statement is as true of their own "back to the good old twenties" formula as it is of the prosperity formulas they attack. The layman cannot be expected to discern for himself that books such as this one are not really economics. Indeed, the book will certainly be well received by many readers who want to believe what it says, and who will be only too happy to characterize dissenters in the authors' terms. Vigorous controversy on the margins of economic science is highly desirable; interpretations of imperfect factual data are bound to differ; as people, economists will attach different weights to subsidiary and non-economic objectives of economic policy; but if the public is to be allowed in for such debates, the exact nature and extent of the disagreement should be made clear. Books such as this one will serve only to revive the legend that "economists never agree," and to destroy public confidence both in economics and in economists. Such a result cannot be dismissed lightly. Lack of public confidence in economists leads to bad economic policy, and bad economic policy can lead anywhere—depression, revolution, war.

According to the Preface, this book was written on the train between New York and Washington—mostly, one suspects, on the way back from the crowded hubbub of Washington offices to the dignified quiet of Wall Street. Here is part of the trouble. Too many books on economics are being written on trains, in hospitals, at government or business desks between conferences, in subsidized research institutions. Far too few are the result of long, leisurely and truly independent research. Economic thought will no doubt be greatly enriched through the experience gained by economists in business, finance, government, trade union organizations, and so forth in the last fifteen years; but it is high time for a fair number of economists to go back to their ivory towers.

BENJAMIN HIGGINS

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Public Finance; Fiscal Policy; Taxation

The Taxation of Corporate Income. By CHARLES JOHN GAA. (Urbana: Univ. of Illinois Press. 1944. Pp. x, 285. $4.00.)

This book consists of a long series of short comments on the problems and procedures of federal income taxation under the following chapter titles: Accounting and Taxation (7 pp.); What Income Is (14 pp.); Periodicity (25 pp.); Income Realization (12 pp.); Non-Recurring Items (57 pp.); The Accounting Entity (24 pp.); Gross Income Items (9 pp.); Deduction Items (36 pp.); Amortization (18 pp.); Cost of Goods Sold—Inventories (10 pp.); An Income Concept (11 pp.).

There are no highlights, and the organization is not effective. The treatment is largely historical, with a minimum of analysis and constructive suggestion. Although the book is dated 1944, it contains no mention of any of the de-

velopments of the last five years. Perhaps the picture of the confused state of accounting theory (pp. 18-19) would be a little less gloomy if consideration were given to recent developments, including the 25 research bulletins issued by the Committee on Accounting Procedure of the American Institute of Accountants. Notwithstanding the title, much material is included (*e.g.*, the discussion of traveling expenses on pp. 152-53) which has no significant bearing on *corporate* income taxation. On the other hand it hardly seems reasonable to omit or minimize such important subjects as consolidated returns, excess-profits taxes, and the experiment with the undistributed-profits tax in a study of the taxation of corporate income. The style is scrappy (a great many of the paragraphs running only two to four lines). There are 1409 footnotes (which should be a world's record) occupying 55 pages following the discussion. None of the references, apparently, are to materials issued later than 1939. Among significant books not referred to is Gilman's *Accounting Concepts of Profit* (1939). Many of the subheads deal with unimportant topics and it is confusing to find no subheads in the text of Chapter I although nine are listed in the table of contents.

Dr. Gaa does well to indicate that "accrual accounting" means a process of "matching" incomes and expenses in terms of periods and is properly critical of the failure of the Treasury to recognize the application of this basis adequately, particularly with respect to prepayments by customers and estimated costs applicable to current revenues that will be literally incurred in later years. In the light of some of the amazing decisions of recent years he could be still more critical. Things have come to a pretty pass when the Tax Court takes the position that funds deposited by customers in advance of the furnishing of goods and services by the vendor are realized income when received. The plain fact is that such collections give rise to definite liabilities to customers, and no income whatever is involved under any theory of matching or accruing. The decision of the Court in South Tacoma Motor Co. v. Commissioner (3 TC 51) has no adequate legal basis and not a vestige of support from an accounting standpoint. We are all guilty, however, of using misleading terms in this connection. Thus we should not refer to taxpayers who "*sold* service contracts to customers" to describe collection of advances and the issue of receipts therefor in the form of strips of tickets or coupon books.

The author's suggestions that "distributions of income made to any equity can be considered in the nature of expenses for the use of capital" and that "to the extent that . . . short-term contributors, or others, are financing the corporation without a return for their services, the dividends or interest received by the corporation may be said to be inflows, similar to gifts, not matchable with outflows" are interesting but not very convincing from the standpoint of corporate accounting. The discussion of "reserves" (beginning on p. 31) is inadequate, particularly with respect to classification and explanation of accounting significance of amounts credited to reserves. There is no discussion of the special problem of reserves for war losses and reconversion costs.

The author adopts a broad concept of income for tax purposes, and thus

recommends that gifts be treated as income (p. 83) and that the "entire structure of capital gains and losses . . . be eliminated" (p. 91). (Query: if gifts are income why cannot proceeds of bequests be similarly treated?) He recommends exclusion of "unrealized appreciation" and "unrealized value shrinkages" on the ground that they "cannot be measured currently for expedient use" and not on the score of "mere conservatism" or lack of it (p. 97). With respect to the question of "gains or losses upon the acquisition or disposal of reacquired shares," he points out that accountants generally hold "that transactions in a corporation's own shares do not give rise to income" (p. 120), but offers no clear-cut criticism of the Treasury's fallacious position and does not even refer to the analysis presented by Hord[1] some years ago, which exposes the basic weakness in this position.

The discussion of revenue realization for tax purposes is poorly organized. The author does not seem to recognize that the "installment method" (pp. 53-54) is simply a special case of the "cash basis" (p. 56). There is no thoroughgoing consideration of the interesting philosophy underlying the LIFO procedure for computing cost of sales and inventories—a philosophy which considers income to be effectively realized only when there is an excess from the proceeds of a sale above the amount required to renew all the cost factors consumed in making the sale. No mention is made of the special problems of accruing income under CPFF contracts and in other connections under war conditions.

In commenting on "losses on the abandonment of assets" (pp. 103-05), the author makes no reference to the problem of writing off plants in foreign countries or the treatment of subsequent recoveries on such properties. A special chapter is devoted to amortization (including depreciation) but there is no mention of amortization of war facilities, and the important and controversial subject of amortization of intangibles is dismissed with a few lines.

This book does not include any major proposals for simplification of the tax structure or basic modifications designed to bring about greater equity in the application of income and profits taxes. There is, however, an occasional comment having some bearing on these questions. For example, on page 127 (in connection with an inconclusive discussion of stock dividends) the author suggests: "Much simplification and more justice under the income tax law probably would result if the corporation entity were overlooked for tax purposes, as is done with partnerships, and the income were taxed directly to the shareholders as it arose." With the coverage apparently limited to the period prior to 1940, there are no references to the programs for tax reform included in recent publications (for example, *Production, Jobs and Taxes* by Harold M. Groves). In the concluding chapter, however, Dr. Gaa adds his voice to those who have long advocated creation of a nonpartisan, scientific committee or commission to study the tax situation systematically and formulate a long-range program of revision.

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[1] *Accounting Review,* Vol. 14 (Sept., 1939), pp. 272-85.

*The Corporation **Franchise Tax as a Basis of Taxation.*** By RICHARD W. LINDHOLM. (Austin: Univ. of Texas Press. 1944. Pp. xviii, 276. $4.50.)

The taxation of corporations is one of the most controversial issues in the whole field of taxation. Since the initial impact of these taxes is directly on business, the possibility of their being repressive is very real, and the many opportunities for shifting leave the final incidence uncertain. Yielding, as they do, approximately 40 per cent of all federal tax revenues today, and equivalent amounts in some state tax systems, they are too important either to be relinquished or ignored. Yet there is no agreement as to the best form of corporate taxation, and most of the "justifications" for such taxes are based on shifting sands. Consequently, any new light that can be obtained on this important subject is to be welcomed.

Dr. Lindholm has limited his study tc general rather than special franchise taxes, but as he has defined the field this covers annual taxes on both property and income as well as organization taxes, and applies to federal levies equally with state levies.

The book gives a brief account of the development of the corporation, going back to ancient times. It emphasizes the close relationship of the growth of corporate powers with government financing. In England, particularly, it is noted that corporate privileges were sold for the benefit of the national treasury throughout the seventeenth and eighteenth centuries. In the discussion of American corporate taxes the author emphasizes the tendency of legislators to take advantage of the opportunity to obtain revenues in exchange for corporate privileges, and minimizes the explanation that special corporate taxes were attempts merely to levy the equivalent of the general property tax when intangibles were found to be evading the general levy (pp. 61-62).

The historical development is followed by an analysis of the legal and economic bases of corporate taxes. Toward the end of the volume the present status of corporation taxation in the United States and foreign countries is summarized.

The discussion of economic bases is perhaps the least satisfactory part of the study. The author discounts the criticism of those who would apply the test of taxpaying ability on the ground that the revenues from these taxes may well be spent for the benefit of the poorer group of stockholders. His contention "that the fact that the government is collecting additional taxes very nearly presupposes additional expenditures" (p. 105) seems highly questionable in view of the fact that there is a choice of tax sources even today, and that deficit financing is an accepted alternative. Moreover, there is no reason to believe that small stockholders as a class benefit from government expenditures, as he implies, more than others.

In his discussion of the problem of reaching all corporate income without double taxation of the distributed portion, he makes no mention of the important report of the Committee of the National Tax Association on Federal Taxation of Corporations, 1939, although he discusses the reports of earlier National Tax Association committees at some length. Incidentally, the report in question is in many respects at variance with the author's conclusions.

He dismisses the taxation of undistributed income to the stockholders on poorly supported grounds. The contention that the difficulties of administration are all but insurmountable (p. 111) is not so widely accepted that it can go without argument. And the statement that such taxation would favor the rich corporations "which are already distributing practically their full net income" (p. 111) is not borne out by any data known to the reviewer.

The book leaves something to be desired in the matter of accuracy. To mention a few instances, some of the footnote references (*e.g.*, on p. 25) are incorrect. The table of percentages of state revenues from franchise taxes (p. 195) has several errors. These errors are found in the source table, but a little thought might have led the author to question at least the figure of 3.88 per cent for Delaware corporation taxes. The correct figure is 38.8 per cent. And the author has taken a good many liberties with some of the quotations, notably that from the *Encyclopedia Britannica* (p. 37).

The author's conclusion, toward which the discussion throughout the study has been consistently pointed, is that the principal—and adequate—justification for corporation taxation is monopoly control (p. 244). Consequently, he suggests that small and large corporations should be taxed according to different principles. He proposes two types of franchise—one for small and medium-sized corporations and one for large (p. 246). The former group would be taxed under the partnership method; the latter would be subjected to an apparently more steeply progressive income tax than that now in force. The reviewer is left with the impression that the discussion leading to this proposal has been somewhat weighted in its favor. However, complete objectivity is not to be found in the best tax studies and the proposal does point up an important consideration in the thorny problem of corporate taxation. This and the summaries of corporate tax history and practice make the book a useful contribution to this field of study.

MABEL NEWCOMER

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International Trade, Finance and Economic Policy

British Finance, 1930-1940. By WALTER A. MORTON. (Madison: Univ. of Wisconsin Press. 1943. Pp. xii, 356.)

The spring of 1943 was too early to begin to appraise British financial policy during the war, and Professor Morton wisely did not attempt the task that would necessarily have been left uncompleted. Only rarely he touches on the events of 1940, and on one such occasion he refers to the dramatic statement by the late Ambassador to the United States, Lord Lothian, that Britain was nearly at the end of its cash resources in December, 1940. Professor Morton adds that the cash resources were then 3 billion dollars. The authority for this estimate is not given and it would seem to be too high, since we know from one of Sir John Anderson's last pronouncements as Chancellor of the Exchequer that in March, 1941, when Lend-Lease began, the British net cash balance was reduced to a single digit in millions of

sterling. Spending in the United States on the sinews of war had proceeded at such a rate that Britain was indeed "broke."

In the main, however, the book deals with British finance in the world setting during the most chaotic and controversial decade of the inter-war years. The scope of "finance" has been generously interpreted, and sometimes the author goes pretty far afield in his search for broad and deep causes, political and psychological as well as economic, of the events under examination. This gives the book a digressive character, and in fact it can be dipped into at random with almost as much reward as that obtained from consecutive reading. This is not necessarily a defect, but, as the author recognizes, the very breadth of his treatment makes it impossible to deal exhaustively with any one topic.

The structure of the book is such that the framework of thought does not stand out clearly. The average reader will sometimes experience an exasperating feeling of irrelevance and even prolixity, more so than is really justified. The first of three Parts examines the British financial crisis of 1931, the measures adopted to deal with it, and the alternative proposals that were rejected. Quite rightly, some account was taken in Part I of events and policies abroad, and this reëxamination of the problems of 1931 is of current interest. It reveals the difficulties, or as some would say the weaknesses, not only in the gold standard but in any international monetary system. Professor Morton believes that the alternatives to going off gold, namely, the mobilization of British foreign investments, or the pursuit of a vicious deflationary policy, were rightly rejected. He does not say so, but his own analysis would seem to support the view that more could have been done in an effort to avoid the breakdown of the gold standard only if there had been more international organization. (See page 54, note 6.) If this is true, the moral for the Bretton Woods Agreements is clear. But Professor Morton refuses to moralize about the virtues or vices of the gold standard. In his view, what we want from the international monetary system is an orderly method of restoring equilibrium with a minimum of suffering all round, and Professor Morton does not believe that zero losses for external creditors of one kind is a perfect solution, although this is the view of those who believe that national honor demands the maintenance of the gold standard at all costs in the face of glaring disequilibrium.

Part II of the book is called "International Finance," but it is really an examination of events subsequent to 1931, for the most part topically rather than chronologically. The thread of argument regarding British financial policy is not easy to find in this Part. It is possible that the reader would have been more skillfully guided if Part III on Domestic Finance had come first and if the policies there under review had then been more deliberately integrated in the international picture. But the task is enormous, and it would be churlish to criticize Professor Morton for choosing his own method of exposition.

The following are among Professor Morton's main conclusions from his examination of the pre-war decade: (1) Britain's "going off gold" was not a deliberate act of policy nor was it a stroke of genius that played an important

part in British recovery. In fact, experience elsewhere in the world indicates that contemporary opinion overestimated the importance of exchange depreciation and gold devaluation as economic stimulants. (2) British recovery up to 1937 was the result largely of "natural forces" and cheap money, although Professor Morton considers the latter to have been a small and doubtful factor. By "natural forces," Professor Morton seems to mean the absence of direct action by the government to promote recovery and especially action that involves deficit financing. After 1937, however, rearmament began to dominate the scene, and government spending assumed a prominent place. (3) Professor Morton rejects the "mature economy" theory as the basis of the claim that government should be responsible for the volume of investment. In his view, that theory belongs to the guesses of the philosophy of history rather than to the generalizations of science. He agrees that government should accept some responsibility for the volume of employment but argues that action should be cautious, based on trial and error within a "mixed" system of mainly private enterprise, with the government admixture designed to be noncompetitive with private enterprise, rather than daring and sweeping on the assumption that private enterprise cannot do the job. Even if private enterprise "after a period of trial, fails to respond adequately" Professor Morton, while admitting the inevitability of the extension of government influence, would still prefer the process of trial and error to grandiose planning based on a highly questionable prognosis of future development.

REDVERS OPIE

Washington, D.C.

Model Bilateral Conventions for the Prevention of International Double Taxation and Fiscal Evasion. (Geneva: League of Nations. 1945. Pp. 85. $1.00.)

This book is a report of the Second Regional Conference of the Fiscal Committee of the League of Nations, held in Mexico in 1943. The conference included representatives from Canada, the United States, Mexico, and eight of the South American countries. The report presents three model bilateral conventions, pertaining respectively to the income tax, successions tax, and reciprocal administrative assistance for the assessment and collection of direct taxes. These conventions are explained and discussed.

The conference was only one link in a chain of activities seeking to establish international fiscal coöperation. The Mexico meeting had before it the work of a previous conference in Mexico in 1940, and this in turn was preceded by the work of the General Meeting of Government Experts on Double Taxation and Fiscal Evasion, which was organized by the League of Nations in 1928. Several meetings of the Fiscal Committee worked on the subject from 1930 to 1939, and numerous bilateral conventions were concluded in the prewar period.

The income tax convention proposed at the Mexico conference included among its major recommendations the following: In general, income may

be taxed by a country when it results from property or activities located therein. In the case of personal services, a resident of Country A becomes taxable in Country B on his earnings there if he stays in B more than 183 days during the taxing year. In the case of business earnings, a corporation domiciled in Country A is taxable in Country B if the company maintains a "permanent establishment" of a "productive character" in Country B. Mere sales to, or purchases from, customers in B will not render the A company taxable, and it may even maintain a purchasing establishment in B without becoming liable to its taxes. Apportionment of earnings between home and foreign branches is to be by "separate accounting," and this is said to conform to "the usual practice among concerns engaged in international business." Provision is made for other apportionment procedure (similar to that applied by the American states) for firms that do not use separate accounting.

Income from capital invested in Country B by the residents of Country A (such as dividends and interest) is also taxable in Country B. Country A may apply its income tax to all of the income of its resident taxpayers, wherever earned, but it must credit against these taxes the sums paid by these taxpayers to Country B. "This deduction is, however, limited to an amount which bears the same proportion to the tax which would have been due in the country of the taxpayer's residence or 'fiscal domicile' on his entire income as the income taxable in the other country bears to that total income." These provisions ensure the domiciliary country the opportunity of applying a progressive scale to a full measure of the taxpayer's income and of applying the same relative burden to taxpayers whether or not part of their income is from foreign sources. Moreover, neither country is allowed to discriminate against foreign investors or businesses as compared with domestic ones.

The rules recommended for the avoidance of double taxation of successions are similar to those offered for the income tax field. Apparently even stocks owned by deceased residents of Country A are taxable in Country B if they represent corporate property in B. At least this is the case where the stocks are kept in B and title to the property passes under its laws. This is a controversial point, however, and the convention deals with it rather ambiguously.

Finally, a convention is offered to establish procedure for the exchange of information and for the coöperation of administrators in levying and collecting taxes from taxpayers in whom the countries have a mutual interest.

Such work as that of the Mexico conference can be applauded as international coöperation at its best; it is far more important that there be agreement on international tax relations than that it be perfect in all details. Among the salutary results of such agreement is the assurance to capital-importing countries that their tax bases will not be depleted by outside economic penetration, and at the same time, the assurance to capital-exporting countries that their investors abroad will not be subject to arbitrary discriminatory or double taxation (and, hence, unfair competition). Uncertainties are the great impediment to the flow of capital across boundary

lines. The Bretton Woods proposals attacked some of these uncertainties; similar efforts in the field of taxation are a necessary supplement.

International efforts to alleviate double taxation may also be useful in stimulating the American states to do something about the deplorable multiple taxation of interstate business and investment. That there is likely to be more real coöperative intercourse between the United States and Canada than between Michigan and Ohio is strange but true. Here is a problem which cries out for attention by administrators' organizations and by the Bureau of Internal Revenue at Washington. There are many important differences between international and interstate multiple taxation, but the latter should be at least as solvable as the former.

To be sure, considerable thought and some literature have been devoted to the domestic multiple taxation problem. Some years ago Professor A. L. Harding, in his *Double Taxation of Property and Income*, one of the Harvard Studies in Conflict of Laws, worked out certain principles for dividing tax bases among jurisdictions. The main criterion selected was that of "economic integration," the degree to which property and income enter the productive activities of the contesting states. This principle is quite consistently applied in the conventions proposed at the Mexico Conference. Professor Harding's conclusions were roundly criticized as inimical to the application of graduated rates and inconsistent with the logic of a personal levy. But the proposed conventions meet these objections successfully. Moreover, income is too important a tax base to be limited to a personal levy. However, here again it may be said that action against double taxation is far more important than the kind of action. The Mexico Conference has convincingly demonstrated that the evil of multiple taxation is far from invincible.

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Industrial Organization; Price and Production Policies; Business Methods

Industrial Organization and Management. By LAWRENCE L. BETHEL, FRANKLIN S. ATWATER, GEORGE H. E. SMITH, and HARVEY A. STACKMAN, JR. (New York: McGraw-Hill. 1945. Pp. xii, 798. $4.50.)

Few texts in industrial organization and management achieve a well-balanced exposition between general principles of management and the details of actual business practice. They either adopt the "handbook" type of presentation where descriptions of operating details and applications of techniques prevail, or they become general summaries of the economic and engineering principles used by management and largely ignore problems of application. In general appraisal, this book attains such a balance of exposition. This achievement is more praiseworthy in view of the fact that texts prepared by several authors, and even more so, by authors who are actual practitioners in the various fields under discussion, are generally characterized by a consideration of the trees more than the forest. For the

most part, these authors do not become absorbed in the details and techniques of practice in their several specialized fields but present the picture of an industrial firm as a coördinated and integrated economic unit.

Another commendable feature is the excellent documentation from current and extensive sources. Government materials, current economic, engineering and business periodicals, and monographs and reports of business and management associations and research agencies have been used to good advantage. The analysis has been kept timely by the inclusion of many new applications of principles and extensions of techniques which occurred under the pressure of wartime demands for peak production. By recognizing the ascension in importance of the coördinative functions of management and the almost universal trait of executives to consider the problems of their particular firms as unique instead of realizing that there are general and fundamental principles of management which can be effectively applied to their specific situations, the authors indicate insight into two prevailing characteristics of modern industrial management.

There is no one best pattern for arranging the various divisions of the subject of industrial management as long as the interrelationships of the various functioning departments of a firm are stressed. Arrangement and emphasis should be determined by the objectives to be served. However, it does not seem that the objectives of a general textbook in industrial organization and management are satisfactorily served where approximately one-half of the book is concerned with production and personnel management with a consequent slighting of other equally important managerial tasks. It is unfortunate that such essential topics as organization management and planning, purchasing, the economics of equipment, and sales management and price policy are either superficially treated or omitted. Presumably on the assumption that the value of instruction in industrial management lies in developing ability to apply general principles to practical industrial situations, the authors have followed the traditional method of presentation wherein case materials are used to illustrate the management principles developed in the text and also to give the student some rehearsals in applications. There is a traditional difficulty which accompanies this method. Because of the limitations of space, the case problems are invariably weak, vague and misleading in their attempts to illustrate the applications of principles. This difficulty is apparent with many of the cases appended to these chapters.

The first six chapters provide a general survey of the development and present nature of industrial enterprises in the American economy. They include not only the pattern of historical development, but also a discussion of the ownership and operation arrangements prevailing currently. Emphasis is placed upon the structure of the industrial economy and the framework of relationships between management, ownership, finance and government within which firms operate. These introductory materials are better organized and presented than those found in most books on industrial management. Ownership and creditor rights and equities deriving from venture and loan capital investment processes and various ownership arrangements are generally

but adequately set forth without conveying the impression that the authors have undertaken to provide a short course in business finance.

A more effective presentation might be obtained by considering industrial risks and forecasting prior to basic industrial ownership and operation structures. With this sequence, ownership and operating structures could be more immediately related to financing the enterprise. Chapters on the elements of administration and organization in industrial management texts are often confusing and incomplete. There is a lack of precise definition and uniform usage of terms; even the term "organization" itself is commonly used with several different meanings in any single discourse on this topic. The various types of organization structures are concisely described in this book, but there is not sufficient analysis of the evolution and purposes of these structures to convey any real understanding of them. Methods of departmentation, types of departments, distinctions between control, advisory and service staff functions, and the need for organization management and planning, are typical of the shortcomings. Even in the final chapter where the authors pay particular attention to coördination of the enterprise, organization, as the principal device by which coördination is achieved and control is maintained, receives only cursory attention.

Product development is logically presented beginning with market acceptance and proceeding through research, the basic sales and manufacturing decisions required about new products, product engineering and decisions relating to product simplification, diversification, and standardization. The management of physical facilities including plant location, layout, buildings, and the selection and installation of equipment are briefly covered in one weak chapter. The most serious omission is that of the economics of equipment. The economic aspects of the general problem of equipment selection, use, and replacement, are certainly equal in importance to the factors of arrangement and production flow in factory operations. However, with the exception of a general statement on the problem of obsolescence, in the chapter on methods analysis, these factors are ignored. Surely in an economic atmosphere of less than full employment with stagnation theories predicated, among other causes, upon the existence of a great fixed capital implementation, the problems of the management of fixed capital investment in equipment would seem to be important, and should become especially significant to industrial firms emerging from the war with greatly expanded equipment.

The major portion of the book is concerned with the "Operation of the Industrial Enterprise" (Section III) which includes manufacturing the product, industrial relations, selling the product, and controlling the office and financial operations. Manufacturing operations are viewed in the sequence of planning production, controlling materials, controlling the quantity and quality of output, and methods and work analysis. Much of the confusion which usually persists between planning and controlling production is eliminated here through careful definition of terms and by a consideration of the planning phase for semi-serialized manufacture as well as for the two extremes of completely serialized and job-order production. The objective of planning for serialized production is a "balanced production line"; semi-

serialized manufacture seeks "balanced schedules"; and job-order production plans for "balanced machine loads" (p. 242).

Comprehensive materials control includes the four phases of purchasing, external transportation, inventory control and internal materials handling. How to succeed as a purchasing agent is summarized in a series of "constructive purchasing policies" (p. 255), wherein purchasing agents are advised, among other things, that "acceptance of personal gifts and favors from vendors, particularly Christmas gifts, world series or prize fight tickets, and free dinners and entertainment, is a rather controversial issue" (p. 256). Readers are even asked to contemplate the case of the purchasing agent whose vendors give him a quart of whiskey, one necktie, ten calendars, two memo pads, one paperweight, one box of candied fruit and one dozen golf balls for Christmas, and to decide which gifts he should accept and why (p. 311). Fortunately these aphorisms on purchasing are followed by some down-to-earth descriptions of practices in shipping and receiving, inventory control and material handling, and one's faith in the general proposition that executives accomplish more useful functions than deciding what to accept for Christmas is partially restored.

The two chapters on routing and scheduling and on dispatching are well written because the objectives and principles are kept foremost in the discussion and just enough supplementary illustrative material is added. Production control "systems" must be designed for any given plant and will vary among plants in terms of such factors as the internal organization of the firm, characteristics of the supervisory and operating personnel, the extent to which production planning is performed and the inventory control system. These quantity phases of production control (*viz.*, routing, scheduling, and dispatching) are followed by the quality phase. "Quality control" is used in its broad meaning to include not only final inspection but also techniques, like statistical quality control, to regulate the variables present during processing. The short description of the Shewhart techniques views them in proper perspective and it is regrettable that a brief illustration of control charts is not included. Methods analysis and work simplification are appropriately related to production planning and control. Divorcing work simplification from time study and making the former a device important to operations and the latter to wage and salary administration are in accordance with modern practice.

Industrial relations are viewed as including the three aspects of labor relations, personnel management, and public relations. Personnel management is discussed only from the restricted viewpoint of the employment office and considers the problems of developing a labor supply; selecting, testing and interviewing prospective employees; establishing employee records; merit rating; and turnover, absenteeism, and employment stabilization. Training programs for executive, supervisory and operative personnel receive a timely emphasis in the light of industrial experience during the war and the post-war competitive advantages to be gained by the organization which is "training-minded." Employee counseling which is primarily useful where special personnel problems (*e.g.*, the employment of women in industrial

plants) exist, deserves more consideration than it receives since it may also be of value in dealing with the special problems incidental to the employment of returning veterans.

As to labor relations, the major difficulties apparent in the joint relations of labor and management are listed as problems of collective bargaining itself (wages, hours, etc.), problems regarding the coördination of the many diverse programs of unions and management, and those which are concerned with the extension of government controls to protect the public interest. On the thesis that "The wage relationship is the very heart of sound labor relations" (p. 555), job evaluation and scientific wage and salary administration are held to be indispensable management functions. Commendable features of this chapter are the definitions provided for many of the terms used in job evaluation (*e.g.*, job rating, job analysis, etc.) and the way in which the authors outline the objectives and general procedures of job and merit rating without becoming hopelessly involved in the mass of detail and controversy which surrounds the various methods employed.

Proceeding to time study and wage incentives, the authors suggest as prerequisites to the installation of a successful wage incentive plan: a sound wage policy; a wage structure developed from job evaluation and community surveys; standard conditions and methods for each operation; time studies as the basis for rate-setting; and an understandable translation of time studies into piece rates. After briefly outlining the characteristics of a few of the currently applied types of incentive plans, the conclusion is reached that the "Measurement of the effort put into work by the average employee and variations in the establishment of expected performance remain major weaknesses. Possibly the severest handicap to overcome is the lack of confidence of employees in the integrity of complicated wage-payment systems. The greatest contribution may yet be found in the by-products of methods improvement and the establishment of standard practices as prerequisite to establishing the time standard" (p. 618).

The management of sales concentrates upon the functions of the sales department and its organization, and sales promotion. Sales department functions are classified as those having to do with sales planning, promotion, selling, inquiries and orders, and servicing. No mention is made of the determination of price policies or the rôle of the sales manager in shaping pricing decisions. Control over distribution costs is made a matter of directing sales effort by market analysis and classification and enforcing the sales cost budget. From the point of view of industrial management it would have been more useful to emphasize the management of sales promotion rather than attempt to cover the one aspect of advertising so extensively with a weak discussion of such broad matters as the economic and social aspects of advertising and advertising principles. The difficulties of coördinating the activities of a sales department and of a sales promotion department in a large industrial enterprise are shown clearly by the examples chosen.

Management of the general offices completes the discussion on operations and includes office, accounting, and budget control, and records and reports. Office management, controllership, and auditing functions, as well as such specialized activities as those of the payroll, tax, and credit departments,

are outlined concisely prior to matters of cost and budget control. The section on cost control emphasizes the managerial objectives of organization for cost control and avoids preoccupation with the technical accounting aspects of expense distribution, standard costs, and similar problems even though these matters are fully discussed. The purposes of budgets are planning, control, and coördination and these are achieved through the two phases of budget preparation and budget control. These phases, in turn, depend upon the coöperation and participation of all divisions of the firm, the element of flexibility (*e.g.*, the variable budget) and the immediate availability at all times of data pertinent to the budget. While records provide basic information, reports are necessary to present and analyze this information and to recommend what action should be taken. The basic problems are what records should be kept and how to keep the record system flexible to meet changing demands for information.

The final chapter emphasizes the need for internal and external coördination in the enterprise. Internal coördination involves unifying the activities of the various parts of the firm through "constant experimentation with all phases of company organization and operation" (p. 748), with profit maximization as the objective. External coördination views the industrial firm as operating in its own little world, and in relation to an industrial world, a national world, a geographical world and a world of thought, ideas, and resources. The complicated network of relationships existing in this vast universe between the firm and many other "worlds" cannot be adequately described in a short review. Briefly, however, for each firm "limitless patterns of association are turned up from one moment to the next in kaleidoscopic fashion" (p. 751). Then in a crusading vein and extoling the virtues of a pioneering spirit, the authors list fourteen problems which management must face in the immediate future. They conclude with the exhortation to management "to go forth and meet the great human problems of the times" (p. 776).

It is questionable whether the field of industrial organization and management has anything to gain from additional general textbooks, but it does need a more sophisticated analysis of many of its problems. It needs more of the intensive inquiry and research into its various specialized aspects which the books by Dr. Robert Gordon[1] and Professor Paul Holden[2] represent.

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Tin Under Control. By K. E. KNORR. (Stanford University, California: Stanford Univ., Food Research Inst. 1945. Pp. xi, 314. $3.00.)

In current discussions, the most nearly convincing arguments in favor of international cartels are advanced in the case of raw materials industries which occupy important positions in the economies of industrially backward

[1] Robert A. Gordon, ***Business Leadership in the Large Corporation*** (Washington: Brookings Inst., 1945).

[2] Paul E. Holden, Lounsbury S. Fish, and Hubert L. Smith, ***Top Management Organization and Control*** (Stanford University: Stanford Univ. Press, 1941).

countries, and which suffer from chronic maladjustments arising from the immobility of heavy investments in fixed capital. The maladjustments are bound to be aggravated by the transition from war to peace. Tin is such an industry, and if cartels are to be part of the accepted mechanism of post-war international trade, it is certain that the tin cartel, begun in 1931, will be prominent among the early starters. On the other hand, if a convincing analysis of the structure and operation of the tin cartel from its inception to the middle of World War II should disclose the presence of basic defects in the cartel approach to the problems of the industry—defects inherently incapable of correction—any rational basis for public acquiescence in the revival of the tin cartel would be destroyed; and the destruction would sweep with it the better part of the case for international cartels generally. If we deny the privilege of cartelization to tin, we shall scarcely concede its necessity in many other industries.

Tin Under Control is, thus, a key study, and its appearance is timely indeed; timely, that is, if public policy in this field is to be built upon anything more substantial than fears and pressures. It is also, fortunately, an able study, entirely worthy of the importance of its subject. The treatment is carefully organized (possibly over-organized?) and thorough. Following opening chapters dealing with the commodity, the nature of its demand and the peculiar conditions of its production and supply, the author outlines against a background of industry problems each of the private and governmental-private control schemes employed during the 1930's, and analyzes the results achieved by each in terms of its purported objectives. He continues with an appraisal of the effects of a decade of control upon producers, producing and investing countries (he distinguishes significantly between the two), industrial and ultimate consumers, and upon consuming countries; and, on the basis of an estimate of demand and supply prospects, concludes with a not-too-favorable judgment on the issue of post-war tin control. The analysis is well-directed and penetrating, the statements of facts are fully documented, and the author's approach is sincerely objective. Mr. Knorr is keenly aware of the difficulties facing the tin industrry, is sympathetic to the troubles of its members, and is not horrified by the possible use of "unorthodox" collective measures to meet the situation. His findings, hence, are all the more impressive.

To quote from the Foreword by J. S. Davis, drawn from the author's conclusions: "From the standpoint of the public interest in the world at large, . . . the tin control reveals signal defects. It interfered with the economic distribution of tin production. It made insignificant contributions toward price stability. Its 'buffer-stock' schemes served no useful purpose beyond profiting their participants. It maintained tin prices higher than was necessary, or than was conducive to elimination of high-cost units or to protection of tin against future competition from substitute materials. Moreover, its contribution to the improvement of working conditions in the tin-mining industry was almost negligible."

To this it may be added that tin control, as described by Mr. Knorr, was concerned solely with the palliative protection (rather lush protection, to

be sure) of vested financial interests; no concern whatever was given to basic remedies for the industry's ills, and the effect was to aggravate rather than to lessen those ills. Further, the decisions made under tin control—decisions important to countless thousands throughout the world—rarely reflected any considerations more lofty or inspired than those commonly associated with the ancient art of horsetrading.

It is worth noting that this book should have a very special attraction for *teachers* of economics. All of us have laid out in outline form the arguments pro and con on cartels, and have searched for examples from various sources to give factual content to the propositions as stated barely. *Tin Under Control* goes down the "con" line completely—all the way. I can think of no omissions. It does not appear that the author strove in any way for this effect. It happens simply that the story of tin control, carefully and dispassionately told, contains a full array of reasons why cartelization should not take place, and Mr. Knorr has spelled them out systematically and exhaustively.

It is interesting, however, that in his closing pages and despite the wholly discouraging control record which he has unearthed and recorded, Mr. Knorr still clutches hopefully at what seem to me to be the straws of "planned disinvestment" and "intelligent buffer stock schemes" as possible devices to facilitate desirable readjustment in the tin industry. I believe that the defects he has found in the workings of the tin cartel are organic, inherent in the very nature of organizations of this type and the nature of the tasks they seek to perform. I have considerably less faith than the author in the "redundancy" schemes which so intrigued the British ten years ago; I find it difficult to believe that the physical destruction of productive facilities is the way to economic order and prosperity. Hope for any of these schemes derived from the possibility of government participation in, or direction of their operations (even that of international government), must be blind to the fact that governments were involved, up to their ears, in tin control. And I am afraid that my own experience in the Consumers' Advisory Board of the N.R.A., and in the Consumers' Divisions of the Department of the Interior and the National Defense Commission must leave me quite cold to any suggestions that consumer representation on control committees promises anything beyond an illusory reform.

The truth is that *Tin Under Control* brings us to the edge, but only to the edge, of the really basic issue in this field. The author sticks closely to his immediate chosen problem. He uses his materials to pass judgment upon tin control from 1931 to date and to probe tentatively into the future, but he does not marshal them for a frontal attack upon the issue of individual competitive enterprise *versus any* scheme or combination of schemes, private or governmental, producer-operated or run by producers with consumer representation. At their best, what is being sought by all such schemes is a remedy for the distressing problem of immobility of capital in an uncertain and changing world—a world characterized by multiple entrepreneurship, production for consumption far removed both geographically and in time, consumers free to choose and to change their choices, and wars and weather.

It is pretty difficult in a world so constituted to distinguish between the chances and consequences of mal-investment on the one hand and, on the other hand, the chances and consequences of other types of inefficiency which, in an individual enterprise economy, it behooves business men to avoid. One question which must be asked is whether the risks of mistaken investment can be shifted from individual business men by any processes of collective action (private or governmental) sufficiently delicate and selective in their conception and operation to leave undisturbed any significant productive functions for individual business men to perform, together with any mechanisms capable of spurring or inducing them to adequate performance. A second question is whether, granted the theoretical possibility of devising such processes, there is any likelihood that any commodity schemes or cartels actually set up within the foreseeable future will in fact correspond ever remotely to the pattern. On the first question I am, personally, uncertain; on the second, quite clear.

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Agriculture; Forestry; Fisheries

The Farmer's Last Frontier, Agriculture, 1860-1897. By FRED A. SHANNON *The Economic History of the United States*: Volume V. (New York: Farrar and Rinehart. 1945. Pp. xiv, 434. $5.00.)

"The American farmer has rarely been prosperous." Professor Shannon's book opens with this somewhat Homeric first line. But "rarely prosperous" by what standards or in what comparison? The criterion is never fully explicit. It is not comparison with farmers of other countries; indeed, the lack of a comparative view is a weakness in certain points of the analysis. It is not any explicit comparison with the propertyless industrial worker, though the final chapter on "The Farmer and the Nation" contains some comment on the relative position of agriculture in the national economy.

Perhaps the full argument might be stated as follows: the American farmers have not had the prosperity they might have had *if* they had understood better the land on which they worked, *if* access to the land had been harder for the speculator and easier for the working farmer, and *if* the world of business with which they had to deal had been less ridden by monopoly. The first of these points is developed in the chapter on "Nature and the Farmer," which shows how often the farmer was misled by unexpected variations in the types of soil. The second is the subject of the chapter on "Disposing of the Public Domain." In this, the author, making heavy and fully acknowledged use of the work of Paul Wallace Gates, sets the Homestead act in properly-reduced perspective as compared to the land grants to railroads and other large recipients. "The homesteaders, even including those who acted as tools of speculators, got just about one acre out of every six or seven that the government gave up. Those who took free farms to keep

received about one acre in ten" (p. 64). The third point is implicit throughout and is developed in the chapter on "Governmental Activity in Agriculture" and in the two chapters, rather more descriptive than analytical, devoted to the farmers' political uprising and to their efforts at self-help through coöperatives.

Professor Shannon's discussion of the processes and practical problems of agriculture is fitted, occasionally with some difficulty, into seven regional chapters—two on the South, two on the Prairies to which for this purpose he adds the eastern part of the Middle West, two on the range country, and one that combines the Northeast with the Pacific Coast. The Southern section is notable for the incisive account of the rise of share-cropping, which he describes as "the outcome of years of experimentation to find what method would produce the most constant supply of submissive labor at the lowest cost" (p. 87). Each of the chapters gives evidence of the painstaking research in which, as the author says, "not one word" of his students' discoveries was used until he "had examined it at its source and noted its context" (p. viii). It is clear, however, that the author's keenest interest and richest knowledge applies to the area between the eastern edge of the Prairies and the Rocky Mountains. For the period in question, this emphasis is hardly a fault. These were the regions that were receiving the largest migration and making greatest use of the new mechanical equipment, to each of which a special chapter is devoted. "To a remarkable degree," as Professor Shannon points out, "the major agricultural developments of 1861-1897 centered in or grew out of the Prairie states" (p. 148).

"I have tried," says the author, "to view the scene as the farmer saw it and to picture the farmer himself as he affected and was influenced by the world in which he worked and lived." His greatest gift is in making the life of farm and range intelligible even to city dwellers in what he may think of as the trans-Hudson East (p. 176). The sulky plow, for example, took "the farmer out of the furrow and put him on a seat" (p. 129). "The woodsman needed a longer time for clearing land than the Prairie farmer did for eradicating sod" (p. 20), but the forest provided more food to keep the settler alive till he could get in his first crops. "The dude-ranch student of cowboy glamour should . . . follow all day in the footsteps of the arid-country 'puncher,' when the grass has all shriveled up, and watch him burn thorns from the prickly pear with a blowtorch, while the cattle follow him hungrily from clump to clump" (pp. 207-08). Similarily, the author does much to interpret the census maps of persons to the square mile, which are often used but are hard to visualize in terms of actual settlement. He declares that "Maps showing six or more persons to the square mile are more likely to reveal the frontier of plow farming than those ranging downward to two" (p. 27); and he adds that even a density of eighteen to the square mile represented "scarcely a fourth as much as the land would support" (p. 32).

Professor Shannon sees economic history in terms of problems, both the farmer's and the government's, and is not afraid to use the hypothetical method. He gives, for example, suggestive indications of what might have happened if homesteads had been made inalienable except to the government (p. 55), if the size of the homestead had been properly adjusted to geographic

conditions (p. 75), "if the tendency toward small landownership had not been positively discouraged" in the South (p. 89), and if the federal government "had adopted a rational leasing act, dedicating the range country to cattle and sheep," instead of tempting the small farmer to "erosion and starvation" (p. 219). The editors speak of the vigor with which Professor Shannon disposes of the theory of the labor safety valve. He estimates "that for every industrial toiler who made good on the land there were twenty farmers' sons who moved hopefully, and a few successfully, into the cities" (p. 55). Another controversial theory regarding settlement, M. L. Hansen's dictum that "the European immigrant was not a frontiersman" and that the actual first breaking of new land was always done by the native American,[1] is unfortunately not discussed but is apparently rejected by implication.

The Farmer's Last Frontier is the first to appear but the fifth in proper order of a projected nine-volume economic history of the United States, of which the editors, in addition to the author, are Henry David, Harold U. Faulkner, Louis M. Hacker, and Curtis P. Nettels. To them I offer one minor suggestion. Whoever prepared the footnotes of the present volume has painstakingly dredged up abandoned given names of the authors cited and has filled out their initials in square brackets. The author does not spare himself and thus appears as Fred A[lbert] Shannon, but future volumes might well be spared this pedantry. If, however, the rest of the series keeps to the standard of workmanship set by the present volume, it will do much to increase the substantial content and the seriousness of American economic history. No honest teacher in the field will be able to leave his course without revision to take account of Professor Shannon's work.

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Food for the World. Edited by THEODORE W. SCHULTZ. Lectures given at the Twentieth Institute of the Norman Wait Harris Foundation, University of Chicago. (Chicago: Univ. of Chicago Press. 1945. Pp. xiv, 353. $3.75.)

Food Enough. By JOHN D. BLACK. (Lancaster, Pennsylvania: Jacques Cattell Press. 1943. Pp. vii, 269. $2.50.)

Professor Schultz, the editor of the volume of essays presented in the 1944 Harris Foundation Lectures, is to be commended for his part in developing the program and bringing together a combination of qualified persons representing different fields to present views on various aspects of the important subject of food. The participants included recognized economists, workers in nutrition, students of population problems, and others able to contribute to the broad field of the conference.

The twenty-three essays are grouped under six heads and the formal papers in each part are followed by a section, "Observations of Participants," covering the general discussions. An over-all picture may be presented by referring briefly to each of the six parts.

[1] *The Atlantic Migration* (Cambridge, Harvard Univ. Press; 1940), p. 14 *et passim.*

Part I, The Food Movement, includes papers by Frank G. Boudreau and John D. Black. The former reviews the work relating to nutrition under the League of Nations. The latter reviews agricultural programs of the United States since 1920.

Part II, Population, has papers by Frank W. Notestein and Frank Lorimer. The first presents a summary picture of population growth and prospects. The second considers some quality aspects of population and refers briefly to the bearing nutrition has on this matter.

Part III, Nutrition, consists of contributions from several workers in this field. Papers by C. A. Elvehjem, L. A. Maynard, Paul R. Cannon, Ancel Keys, and Lydia J. Roberts are included. These provide economists and others outside the field of nutrition with a good review of some of the research and knowledge in this rapidly developing field.

Part IV, Food Supplies, includes papers by several economists relating to food supplies, adjustments and economic aspects of nutrition. The authors are Karl Brandt, Walter W. Wilcox, Howard R. Tolley, P. Lamartine Yates, Margaret Reid, and E. W. Gaumnitz.

Part V, International Relations, has six essays by men who through research or administrative experience have come into close contact with foreign trade and international aspects of food problems. The authors include Percy W. Bidwell, Edward S. Mason, Leroy D. Stinebower, Paul H. Appleby, Allan G. B. Fisher, and H. C. Taylor.

Part VI, Consequences and Policy, has papers by Theodore W. Schultz and Karl Brandt. The former reviews some of the material covered by the conference and then considers consequences in terms of food and agriculture. The concluding essay discusses "Elements of an International Food Policy."

Diversity in approach, attitude and emphasis is to be expected in such a combination. In spite of such differences, however, agreement on major issues is substantial. Thus, several point out inadequacies of our agricultural policies between the two wars, particularly in regard to their attention to nutritional problems. Better nutrition is clearly recognized as of public concern. Repeated deference is made to the dependence of good nutrition on adequate incomes and understanding. Attention is directed to the importance of full employment, research and education. Lack of income is pointed to as the biggest limiting factor in the improvement of nutrition. The need for public programs of food distribution even in times of prosperity and in countries of relatively high levels of living is recognized.

Agricultural surpluses rather than shortages are foreseen as post-war prospects in the western world. The densely populated areas of the Orient present distinctly different population and nutrition problems.

International aspects of the food question are recognized, not only in Part V but elsewhere as well. Conflicts between domestic and international policies are pointed out by several.

The quality and contribution of the different essays vary but agreement on a rating scale is not to be expected, so no purpose will be served by reviewing such differences. Since each essay is a separate unit, selection is available to readers. Many, no doubt, will find points at variance with their

own views. The inclusion of the open discussions bring out some differences, and these sections add to the value of the volume.

The primary contribution of this book does not lie in the newness of the ideas present, but in its achievement in bringing together the results of research and thought of a number of competent workers with respect to one of the important topics of today. It is a source of ideas and stimulus to anyone seriously interested in its field. This is merely another way of saying that the book should enjoy wide reading for the field is one of universal concern.

John D. Black's *Food Enough,* in the words of its author, was written "to help our people understand the food situation as it has developed in this war." It is intended for the lay reader rather than the professional economist. The book is concerned with the effects of the war on the demand for food, problems of meeting food needs during the war, and questions of price control and rationing. The closing chapters consider the international food picture, the conference at Hot Springs, and post-war food prospects.

Because the book deals so largely with the situation existing at the time it was written (1943), much of its content is of limited usefulness for the longer run. Its principal value now and in the future is as a source and a refresher to those who have occasion to review the food problems of the first years of the war. The author writes with his customary aplomb in dealing with questions regarding which there are wide differences of view, and it is not to be expected that all readers will accept his conclusions in every instance.

Incidentally, it might be well to remind publishers that if they expect the claims which they print on the jackets of books to carry weight, they ought to be concerned about the accuracy of their statements. The jacket on the reviewer's copy credits Black with the authorship of East's *Mankind at the Crossroads.*

O. B. JESNESS

University of Minnesota

Economic Geography; Regional Planning; Urban Land; Housing

Report of the Urban Planning Conferences under the Auspices of the Johns Hopkins University: Evergreen House, 1943. (Baltimore: The Johns Hopkins Press. 1944. Pp. xxi, 244. $2.75.)

It is cheering that in the midst of war, groups in many cities took time to think about the post-war problems of the community. In the winter of 1943-44 McGill University and the Province of Quebec sponsored a series of talks on housing and community planning, since reprinted in a monograph. The Columbia University School of Architecture conducted a series of weekly talks and discussions summarized in *The New Pencil Points.* The Cleveland chapter of the American Institute of Architects, the University of Pennsylvania, and the University of Cincinnati sponsored similar series that attracted

mature leaders in civic design, finance and government. The same ferment undoubtedly was at work elsewhere: I speak only of series of which I have personal knowledge.

The sessions sponsored by the Johns Hopkins University constitute another such series. They represent an interesting innovation in conference technique, made possible by "the setting of Evergreen House" which "its gracious mistress, Mrs. John Garrett" made available. On each of six Saturday evenings, one to three invited speakers presented prepared papers before a "considerable local public," with a question period. On Sunday mornings and afternoons the speakers met with twenty to thirty invited guests for informal discussion.

The *report* is, of necessity, extensively edited and rearranged, since these round-tables, by their very constitution, ramble on and get into blind alleys and repetitions. The six week-ends are presented under four headings: Basic Directives in Urban Planning; Transportation; Housing, Health, Recreation and Welfare; and The Governmental Framework and Other Processes of Urban Planning.

Two outstanding Baltimoreans, Abel Wolman and Dr. Huntington Williams, presented papers. For the rest, the conference took full advantage of its proximity to Washington and called upon leading social scientists, architects and engineers from several government agencies.

The Editorial Committee—Messrs. Bryn Hovde, Thomas MacDonald, Glenn E. McLaughlin and Huntington Williams—follows the formal papers and summaries of discussion with an "Evaluation." From this, one would gather that experts continued to disagree on the really knotty problems, that the same ideas were presented at Evergreen House that were simultaneously being discussed at Montreal, New York, Cincinnati, Cleveland, Philadelphia, and elsewhere. The evaluation is honest enough to suggest that one of the chief values of the conference was to bring together in a charming, informal setting officials responsible for programs in aviation (to which extensive attention was given), highways, rail transportation, housing and health, and to make them more aware of the reciprocal interactions of their specialties and of the specialties and the city as a whole. As anyone knows who has striven for coördination and cross-fertilization of disciplines, the beginning lies in better personal acquaintance and mutual understanding; on this score alone, the conferences could be considered well worth while. The *Report* is a memorial of sessions that evidently stimulated the participants, it carries some of the stimulation over to the printed page.

CHARLES S. ASCHER

New York City

Labor and Industrial Relations

Management at the Bargaining Table. By LEE H. HILL and CHARLES R. HOOK, JR. (New York: McGraw-Hill. 1945. Pp. vi, 300. $3.00.)

The purpose of this book, as set forth by the authors, is "to assist man-

agement in safeguarding its rights so that those rights may be used to make collective bargaining work as an instrument toward better employer-employee relations" (p. 4). Concerning the authors, Mr. Hill is vice-president in charge of industrial relations of the Allis-Chalmers Manufacturing Co.; Mr. Hook is secretary of the Rustless Iron and Steel Corp. Both men have served on the National War Labor Board.

Starting with the proposition that every collective agreement can be broken down into the six component parts of union protective clauses, management protective clauses, employee protective clauses, seniority, grievance handling, and miscellaneous clauses, Part I, The Content of the Collective Bargaining Agreement, proceeds with an examination of these respective clauses. The method of discussion is generally to present an example of a poor clause, discuss its deficiencies with respect to the preservation of managerial rights, and then offer an example or examples of clauses considered acceptable from the same viewpoint. Part II, Technique of Collective Bargaining, is a much briefer section devoted to advice to managements on their preparation for bargaining and the negotiation of the agreement. This section includes a chapter on the presentation of cases before the War Labor Board.

This book will prove valuable to those to whom it is addressed—management representatives—as a manual or guide teaching them how to resist the demands of union leaders. It will prove helpful to union leaders as a clearly delineated picture of what are probably prevalent management attitudes toward the union and beliefs concerning company-union relationships. It is of interest to economists primarily for what it implies regarding the nature of what I have elsewhere called the "organized business."[1] This review is concerned primarily with those implications.

The principal problems raised may perhaps best be presented in the form of two inter-related questions.

(1) The preservation of managerial prerogatives, or rights of management as the authors prefer to call them, is the central theme. The book is replete with such expressions as "fundamental management rights," "the invasion of rights necessarily reserved to management," "sole responsibility," "freedom to manage." The argument runs in terms of management responsibility for efficient operation of the business, requiring the reservation of discretion in certain areas to management and management alone. This is of course no new line of thought. It is an attitude which organized labor has had to combat from its inception.

But what are these management rights which must be preserved? The authors offer no clear answer. In one place they express the hope that "union negotiators will recognize that their essential and basic function is to represent the employees in matters relating to wages, hours, and working conditions, rather than the invasion of rights necessarily reserved to management" (p. 4). Yet alert union negotiators are now recognizing that many areas heretofore discretionary with management—depreciation policy, production techniques, sales and advertising programs, methods of company financing—

[1] *Jour. Pol. Econ.*, Vol. LII, No. 2 (June, 1944), p. 97.

are closely related to the wage-paying ability of an enterprise, an area of union interest which the authors admit as legitimate.

In another place management prerogatives are defined as "those rights, or that authority, which management must have in order successfully to carry out its function of managing the enterprise" (p. 56). The opportunities for divergence of opinion on this definition are readily apparent when one weighs the content of the words "must" and "successfully." Many of the clauses now found in collective agreements cover matters which were considered sacred and essential rights by managements of an earlier day. (Do the authors really believe that insurance and pension schemes should be outside the purview of organized employees, as they state on pages 177 and 178?) And if successful management is conceived in terms of efficient production, we must admit that some limitations on efficiency have already been socially approved in the interests of the fuller development of the employee, and that social standards are not static.

(2) In an organized business, established by the collaboration of organized owners and organized workers, both through their chosen representatives, to whom is management responsible?

It is notable that while the authors are recurrently insistent that the employees, in distinction to the union, are a third party to the agreement, the rights and welfare of whom management is obligated to consider, even if necessary by opposing union demands which management conceives to be inimical to those rights and that welfare, they avoid direct mention of the owners—stockholders in most instances—as a similarly interested party. It is not the preservation of the owners' interests about which the authors are concerned, except as those interests are identified with management rights. Yet any "responsibility" of management which can be established must in the very nature of management be responsibility to someone *other than* management.

Under any bargaining agreement, the areas in which collective agreement has replaced managerial determination have been defined, and *within the framework of that agreement* management is—assuming responsible unions—free to manage. The problem of management is how *best* to manage within that framework. It is now largely, but it reasonably should not be, up to management itself to determine as a bargaining party what that framework should be. The removal of certain areas from the sole competence of management may make the problem of management more difficult, but it is surely a phase of "group-government" administration which must be faced and accepted.

If the term "industrial democracy" has any significance, it is that the organized owners and the organized workers jointly establish the terms of their collaboration, and that management owes a responsibility to both parties within the terms of the agreement. To the extent that unions have not entered into any agreement on depreciation policy, for example, they may be considered to have accepted the discretion of the owners exercised through the management, and in this sphere management is responsible solely to the owners. Such spheres are not properly management prerogatives, however,

but owner prerogatives. Whether unions shall be prevented from "invading" them, whether by law, custom or simple refusal, is not properly a matter for management decision.

It is becoming increasingly clear that the status of management (as well as the union) is a subject deserving of deep thought and careful study. The earlier work of Berle and Means, carried forward in the Hearings and Monographs of the TNEC, pointed up one aspect of the problem. The less profound work of Burnham provided other grounds for consideration. The employment of business executives in numerous governmental agencies during the war has raised fresh problems. This volume by Hill and Hook carries implications which point to the need for examining the position of our industrial bureaucracy in still another direction.

NEIL W. CHAMBERLAIN*

Personnel Relations: Their Application in a Democracy. By J. E. WALTERS. (New York: Ronald Press. 1945. Pp. xx, 547. $4.50.)

In the number of topics covered, this volume aims at a high degree of comprehensiveness. While more than half of the book is devoted to the management of personnel relations and specific personnel techniques, there are sections dealing with labor unions, with governmental agencies in the field, and with labor-management coöperation. There is also a statistical appendix, as well as a second appendix in which a suggested form for a periodic personnel audit report is outlined. The author is generous and judicious in his listing of reference material for further study.

The more useful portions of the book will probably prove to be some of the chapters dealing with specific techniques, such as those on employment procedures and on personnel rating. Even in these technical chapters, however, there are occasionally unfortunate errors or implications. Some of these are of minor importance, such as the statement (p. 159) that one of the customary steps in the line of promotion within a company is "from officers to stockholders." Others raise more fundamental questions, such as the lack of a clear appraisal of the rôle of job evaluation (pp. 183-84) with respect to intraplant differentials, on the one hand, and interplant differentials, on the other.

The author has been less successful in integrating the various topics to provide an operational guide to the conduct of day-to-day, face-to-face relations within industry. At best, the task of formulating such a guide is beset with great difficulties. The job is not simplified if we fail to come squarely to grips with some of the most troublesome questions which continually arise to plague the practitioner and the student in the field of industrial relations.

One question of this sort concerns the relation of the personnel department to the rest of the organization. Professor Walters formally recognizes the "staff" nature of the personnel department's functions, although he qualifies his remarks with "to a great extent" and "principally." Nowhere, however,

* The author is now on active duty with the United States Naval Reserve. The opinions contained herein are the private ones of the writer and are not to be construed as reflecting the views of the Navy Department or the naval service at large.

does he pose openly the problems of divided authority that arise if the personnel department is given line authority. At times, moreover, the discussion suggests that the distinction between staff and line, and the appropriate rôle of the personnel department, have been forgotten. Thus, for example, the reference (p. 89) to companies "where the foremen do not have the time for personnel functions." Again, the following statement is made: "One of the chief functions of the personnel relations department is the negotiation of labor contracts . . ." (p. 85). Is the assumption of this function consistent with the staff rôle of the department?

There is an increasing belief among students in the field that successful handling of grievances lies at the heart of good industrial relations. Professor Walters's book contains only two specific references to this question. The first, about a page in length, deals primarily with the formal steps of a grievance procedure, and is included in the chapter on labor unions as one of the "Ways and Means of Accomplishing Union Objectives." The second reference, on page 85, consists really of one sentence: "For any employee dissatisfaction, a procedure for handling grievances can be worked out to the mutual satisfaction of the management and the union."

The author states in the Preface that "the book attempts to present personnel relations . . . from positive democratic viewpoints of those who are actively concerned." To a considerable degree, this theme does indeed permeate the discussion and gives a wholesome slant to the treatment of certain topics. For example, the first "crucial test" for the value of employee service work is "that it has the wholehearted approval of the employees." At times, however, one has the impression that the "democratic theme" has been added as an afterthought to a more or less conventional treatment of a specific technique, or that insufficient attempts have been made to analyze or reconcile apparently conflicting "democratic" points of view. At still other times, the author's enthusiasm for democracy leads him into statements that border on the extravagant. The following passage, taken from page 5, may be a case in point: "Democracy in personnel relations should be able to prevent many difficulties which in the past have existed in industry and business, such as depressions, unemployment, inadequate incomes for one-third of our people, job dissatisfaction, nepotism and selfishness, and greed for money and power."

Douglass V. Brown

Massachusetts Institute of Technology

Voluntarism in Organized Labor in the United States. By George Gilmary Higgins. (Washington: Catholic Univ. of Am. Press. 1944. Pp. viii, 180.)

Voluntarism in Organized Labor in the United States is an examination of the original philosophy of the American Federation of Labor, its modification in the decade of 1930-1940, and the causes that made these changes inevitable. The first three chapters are devoted to a summary of the history of the labor movement, and to the evolution of the idea of voluntarism as shown by the statements of the leaders of the American Federation of Labor. The next five chapters are concerned with tracing the changes in the attitude of the AFL and its leaders, and with assessing the importance of these changes. Father

Higgins has carefully examined the sources and the opinions of both proponents and critics of the voluntaristic philosophy.

The author has not sought to make a case for or against the voluntaristic view. Instead he has sought to examine its character, and to explain why it has been found no longer feasible. While Father Higgins has limited himself to examining the issue as it affects the American labor movement, it is nevertheless true that voluntarism is not peculiarly a philosophy of American labor. Voluntarism is in fact an American, or better yet, a reformist adaptation of Syndicalism. The suspicion and fear of the state common to Gompers, and to his numerically-declining followers, are basic to the point of view of the Syndicalists and Anarchists of Europe and the United States. All emphasize the importance of direct or economic action as a means of improving the lot of the man who works. American voluntarism is not, however, hostile to capitalism, nor does it aspire to replace it by a Socialistic or Communistic society.

American voluntarism which was fashioned mainly by Gompers, while emphasizing the all-importance of economic action and collective bargaining, arose not only from an abstract fear of government intervention, but as a philosophic weapon with which to fight the Socialists. Gompers was convinced that an expanding American society was basically hostile to Socialism and to the propagation of Socialist ideas. He did not believe that the labor movement, faced by the most aggressive capitalism in the world, would survive if it adopted a Socialist philosophy. Nor did he believe that independent political action could benefit labor; for, with the absence of class feeling common to European labor, an attempt to espouse a specific political philosophy or to support a special political party would lead to disastrous division in the ranks. He therefore fought the efforts of the Socialists to commit the economic movement of labor to support of a specific political party, although events forced Gompers to adopt the non-partisan or bipartisan policy by rewarding friends and punishing the enemies of labor.

All of the critics implicitly assume that it was only Gompers and his followers that prevented a larger labor movement, one that included the great basic industries. The critics usually overemphasized the importance of the American Federation of Labor as an organizing instrument of the American labor movement. Actually the job of organizing has been mainly the job of the international unions, and they were naturally fearful of venturing large sums in risky organizing enterprises, as they knew the determination and ruthlessness of the masters of the then unorganized industries. There is no evidence that supports the belief that a greater labor movement could have been organized. In the American environment of early twentieth century America, it is doubtful if any other type of movement could have been built. Several attempts were made, by those hostile to Gompers's views, but all met with failure.

Gompers's anti-governmentalism, as the author shows, never had the unanimous consent of the entire labor movement. Up to World War I the Socialists were a vigorous and by no means inconsequential minority, and later the railroad block succeeded in forcing through the convention of

1922 a resolution favoring government ownership of railroads. This was only a temporary deviation; for, with the defeats of unionism immediately after World War I, the doctrine of voluntarism gained renewed vigor. "Whereas in pre-war days it had assumed a neutral attitude towards capitalism, it now became an ardent champion of the same, considering itself the buffer . . . between Capitalism and the radicalism of the Socialist and Communist varieties." It would have been worth while to investigate the reasons for this change. Following World War I, the American Federation of Labor faced an attack by organized employers acting through the "American Plan," and at the same time the position of the conservative officers was threatened by the Amalgamation movement led by William Z. Foster, then a simulated trade unionist. The vigorous espousal of capitalism was designed to attract more favorable treatment by employers who feared communism, and at the same time it was a reaction against the program of the radical dissidents who had threatened to unseat the existing leadership.

The anti-governmental philosophy had pushed the American Federation of Labor into an extreme position. Instead of espousing the principles of social insurance, the American Federation of Labor actively opposed all forms of government aid except industrial accident insurance. In the 1920's unemployment insurance was dismissed as a dole by the official theorists, who scornfully compared it to the full pay envelope of the American worker. While this philosophy may be tenable during periods of prosperity, it is difficult to maintain in a time of deep depression. The author has well traced the breakdown of voluntarism, the defections of many of its ardent exponents, and the gradual conversion of the American Federation of Labor to a policy of government intervention. He has not, however, fully accounted for the change. It seems, at least to the reviewer, that voluntarism can only be maintained in an era of full or high employment. It is futile to argue for economic improvement through economic action and collective bargaining at a time when many workers have no jobs over which to bargain. In the face of millions of idle the most resolute voluntarist must hesitate in urging abstention of government intervention. Faced by the Great Depression, the American Federation of Labor finally endorsed the principle of unemployment insurance as well as other forms of social insurance. Even a minimum wage for men has been approved, although the author believes that privately the leaders of the AFL were not as enthusiastic for the Fair Labor Standards act as their public declarations would lead one to assume.

Since the New Deal fewer voices have been raised in behalf of voluntarism, largely by several quasi-official philosophers. The American labor movement has prospered and grown to a size unequaled in its history. Much of the growth and prosperity has been due to government support. The split in the labor movement has, however, led to a new series of attacks upon government intervention by several of the leaders of the AFL. The attitude of the AFL in regard to government is somewhat ambivalent. It is satisfied to have government support for the right to organize, but it denounces attempts by the administrative agency to fix the bargaining unit as an unwarranted intrusion by government bureaucrats into the business of labor. The leaders of

the AFL cannot have it both ways, even though they regard government protection of labor unions as a special type of government intervention, one that is exempt from the usual criticism.

It is doubtful if the labor movement will ever return to the earlier voluntarism. This does not demonstrate that this philosophy was wrong or unsuitable for the period in which it was evolved. On the contrary, in the reviewer's opinion, it was perhaps the only policy that would have enabled labor to build the organizations that were the base from which the larger whole has since developed. Unless there is a fundamental change in the attitude of employers toward labor organizations, the protection for the right to organize will continue to be needed. While a limited labor movement does not need government support, an extensively organized one must have it to survive. Moreover, a philosophy of voluntarism is not tenable in an economy in which the government plays a major rôle, and in which it operates an extensive welfare and social program. This, as the author has shown, is recognized by many leaders of AFL unions. Father Higgins's book is a very useful and impartial study of the changing philosophy of the labor movement. In examining the growth and decline of voluntarism he has performed a useful service for all desiring to understand the labor movement.

PHILIP TAFT

Brown University

The Exploitation of Foreign Labour by Germany. (Montreal: Internat. Labour Office. 1945. Pp. 286. $1.50.)

One of the outstanding aspects of the Second World War, the systematic exploitation of foreign labor through Europe by the Nazis, has been carefully recorded and summarized by the International Labour Office in its regular periodicals and recently in an excellent study, *The Exploitation of Foreign Labour by Germany*. This study describes recruitment methods, working and living conditions, wage regulations, measures to counteract foreigners' resistance and also indicates how the families of foreign laborers fared while the breadwinners were away.

Despite the wartime difficulties of obtaining information, the Nazis' vast scheme of European-wide labor mobilization is reported in fairly good detail. Wide use has been made of direct German sources, including the handbook for the guidance of German public employees dealing with foreign workers; the official gazettes in which legislation was published, the publications of the Reich Ministry of Labor and the Offices of the Four-Year Plan, the Commissioner General for Manpower and the German Labor Front. Periodicals and newspapers from Germany and occupied countries were systematically used. Additional facts were also supplied by governments of the United Nations and of liberated countries. Lastly, the International Labour Office has used its own branch offices and its correspondents in various allied and neutral countries. Mr. John H. E. Fried, who prepared the study, has used German sources with caution, realizing that such sources would naturally attempt to conceal some issues or to place the situation in general in a favorable light.

According to this study, one of the first steps taken by the Nazis after conquering a particular territory was to install labor offices or adapt those already in existence in order to facilitate the recruitment of workers. Their methods of mobilization were shrewdly planned and ruthlessly carried out. Even before hostilities actually started in 1939, Austrians and Czechoslovaks had already been added to the labor force of the old pre-1938 Reich. As the nazi tide of conquest rolled onwards, almost the whole of Europe was brought within the orbit of exploitation. The number of people affected ran into the millions—the ILO's conservative estimate is 30 to 35 million people, counting dependent family members.

The conditions of life and labor varied considerably, according to place, type of employment, phase of the war, and particularly nationality. Those from the East were treated worst of all; those from other parts of Europe received less inhuman treatment for the most part. The general disregard of human life only served to aggravate the scarcity of manpower while the cumulative result of persistent compulsion required still greater supervision and repression of the foreign labor recruits. An air of legality was given to the recruiting by the negotiation of bilateral agreements wherever possible with the authorities of occupied countries. Modern scientific methods of mass administration, mass organization and mass propaganda were employed in an attempt to obtain recruits. Since those who refused to register voluntarily for work in, or for, Germany experienced much difficulty in obtaining any other employment or in purchasing food or other commodities which were rationed, the pressure to register must have been great. Nonetheless, the number of volunteers was small; compulsion had to be used widely. To their best ability, and often at the cost of their lives, the conscripts and their families resisted participation in German war work.

The compulsory mobilization of the civilian population under wartime occupation is almost without precedent in modern times. Similarly extreme forms of forced or compulsory labor, though never on such a large scale, have been used in recent times in so-called backward and colonial regions. Before World War I atrocities were exposed in the Congo Free State, the French Congo, the "cocoa islands" of Portugal and the Putumayo district lying between Colombia and Peru—the numbers involved, however, ran in the thousands rather than the millions as was true in the case of the nazi exploitation. Still later, in World War I, the Germans deported Belgian workers for a short time, but ways were found to stop this deportation. Even so, according to James T. Shotwell, an expert observer writing ten years afterwards, the scheme had "considerable consequences for the Belgian people as a whole because their physical and social conditions were affected by it during and after the war."

Many problems raised by the nazi mass displacement and exploitation of labor have already had to be solved or are being met. This study should be extremely useful to UNRRA officials and others who are presently attacking the problem of transferring and repatriating foreign workers. The facts contained in this report should also prove useful to the government and private organizations concerned with such questions as the debt incurred by Ger-

many through wage transfers within the framework of the German wartime clearing system; the amounts of money belonging to foreign workers deposited in frozen accounts in German banks or invested in German savings bonds; and extent of the needed program to help dependents of those workers who did not survive the harsh treatment and heavy work measures.

MAXINE SWEEZY WOOLSTON

Conshohocken, Pa.

Lumber and Labor. By VERNON H. JENSEN. (New York: Farrar and Rinehart. 1945. Pp. 314. $3.00.)

The Cotton Mill Worker. By HERBERT J. LAHNE. (New York: Farrar and Rinehart. 1944. Pp. 303. $3.00.)

The Printing Trades. By JACOB LOFT. (New York: Farrar and Rinehart. 1944. Pp. 301. $3.00.)

These books, with their companion volumes in the series "Labor in Twentieth Century America," are intended to further the writing of "a definitive history of the men and women who have worked for a living in the nation's major fields of production" (editor's Foreword). They are histories of the workers in the lumber, cotton textile, and printing industries, and not merely studies of the trade unions in those industries. The story of trade union organization is silhouetted against the economic structure of the industry, the characteristics of the workers employed, and the changes in their conditions of life and work since 1900. Thus Dr. Lahne, before entering on a discussion of cotton textile unionism, presents twelve chapters on such matters as the growth of the industry, the mill village system in New England and the South, interregional competition in the industry, the working family and its income, hours of work, work loads, and the problem of the "stretch-out." The chapter on interregional competition and the concluding chapter on the organizability of the industry are particularly interesting pieces of analysis.

The arrangement and emphasis of Dr. Loft's study is very similar. The bulk of the volume consists of chapters on the economics of printing, competition and industrial migration, the impact of technical progress, changes in wages and earnings, hours, shop rules, and similar matters. The concluding chapters sketch the development of labor and employer organizations and of the relations between them. Dr. Jensen's book approximates more closely a history of trade unionism. Two introductory chapters on the development of the industry are followed by a brief survey of labor conditions and labor organization in each of the four historic lumbering regions. The remainder of the volume is devoted to the growth and operation of unionism in the Pacific Coast states which now dominate the lumber industry.

These volumes are welcome innovations in labor literature and are assured of a place of permanent usefulness. In point of style, they suffer somewhat from inclusion in the text of facts and figures which might perhaps have been compressed into tables, footnotes or appendixes. The reader frequently finds himself wandering in a maze of detail with little sense of general direction. This defect of presentation, however, can be forgiven in view of the authors' care and diligence in accumulating factual material from a wide

variety of sources. The thorough footnoting and extensive bibliographical notes will make the volumes particularly helpful to those contemplating more specialized studies of labor problems in these industries. The chapters on the growth of union organization are marked by a careful marshalling of facts and a high level of objectivity.

The structure of all three studies is basically chronological and descriptive, with relatively little use of formal economic analysis. The outstanding economic problems confronting trade unionism in these industries stand out inevitably from a chronological account. Examples are the North-South wage differential in textile and its effect on industrial location, the migratory and highly competitive character of the lumber industry, and inter-area competition among job printing firms resulting from differentials in wage rates and total unit costs. One does not find in these volumes, however, a precise analysis of the possible lines of attack on these problems, nor even a complete discussion of the policies actually adopted by trade unions and the economic consequences of these policies.

This kind of analysis, of course, was not within the purview of the series and would have required volumes of much greater length. The authors set out to describe a wide area of industrial experience for a general audience and using a historical frame of reference. This task has been well done, and the volumes cannot fairly be criticized for not doing things which they did not attempt. It is necessary to point out, however, that the economist who uses the tools of market analysis will find here mainly clues and raw material rather than conclusions. These vivid cross sections of working-class experience, drawing flavor and realism from the close personal observation of the authors, suggest the rich variety of problems which await further exploration by students of labor.

Lloyd G. Reynolds

Yale University

TITLES OF NEW BOOKS

Economic Theory; General Works

Engels, F. *On capital.* (London: Central Books. 1945. Pp. 136. 5s.)

Hargroves, E. L., and others. *Oxford economic papers.* No. 7. (London: Oxford Univ. Press. 1945. Pp. 124. 7s. 6d.)

Hicks, J. R. and Hart, A. G. *The social framework of the American economy—an introduction to economics.* (New York: Oxford Univ. Press. 1945. Pp. xvi, 261.)

Marx, K. *Capital.* 3 vols. (Chicago: Kerr. 1945. Pp. various. $3 ea.)

Roll, E. *A history of economic thought.* Rev. ed. (London: Faber. 1945. Pp. 535. 18s.)

Smith, M. B. *Survey of social science.* Rev. ed. (Boston: Houghton. 1945. Pp. 748. $4.)

A new chapter on the government of the Soviet Union and another, on international organization, have been added, and the chapter on social change, rewritten.

Sotiroff, G. *Ricardo und Sismondi—eine aktuelle auseinandersetzung über Nachkriegswirtschaft vor 120 Jahren.* (Zürich and New York: Europa. 1945. Pp. 48. Sw. Fr. 2.50.)

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David Kinley
1861-1944

Doctor David Kinley died on December 3, 1944, in Urbana, Illinois. He was born on August 2, 1861 in Dundee, Scotland, and came to the United States with his father in 1872. His preliminary training was obtained at Phillips Academy at Andover, Massachusetts, from where he went to Yale. After graduation from that university with an A.B. degree he became the principal of the North Andover High School. He held this post for six years and in 1890 went to Johns Hopkins to study for his Master's and Doctor's degrees; these studies were carried on mainly under Professor Richard Ely. When two years later the latter was called to the University of Wisconsin, he invited Kinley to go with him, because, as Ely put it, "he knew Kinley's capacity for thought would make him an excellent pace setter for graduate students." Subsequent events proved the correctness of Ely's estimate of Kinley's mentality and his ability to inspire and to lead students. Any one who sat in on the economic seminars conducted by Dr. Kinley at Illinois could not have failed being impressed by the brilliancy of his intellect, by his quick evaluation of facts versus opinions, by his constructive criticisms, by the way he could arouse the student's interest in fundamentals, by his kindly and wise council. Kinley was a great teacher, though this accomplishment was overshadowed in later years by his organizing and administrative ability.

It was from the University of Wisconsin that Kinley obtained his Ph.D. degree; his dissertation dealt with the history, organization and influence of the Independent Treasury of the United States. During his second year at Johns Hopkins Kinley served there as an assistant and he also taught at the Women's College in Baltimore. He held a fellowship and assistantship at Wisconsin.

In 1893 Kinley came to Illinois as an assistant professor of economics; in the following year he was made a full professor and the head of the department, which position he held until 1915. In 1894 he was also appointed the Dean of the College of Literature and Arts.

It was the administrative genius of Dr. Kinley which took him gradually away from research, from systematic writing and teaching. Already in 1904 in the introduction to his book on *Money* he spoke of the harassing incidents of his administrative work and expressed the doubt whether he would have had the patience to finish the task if it were not for the encouragement and help of his friends.

As the years went by Kinley's administrative responsibilities had been increasing. He went from the Deanship of the Literature and Arts College to that of the Graduate School, having held concurrently the Directorship of the courses of Training for Business, which he later organized into a

College of Commerce and Business Administration; he then became the Vice-President, the Acting President and finally in 1920 the President of the University. He devoted himself with singleness of purpose and indomitable energy to the upbuilding of the University of Illinois and under his able leadership it became one of the leading institutions of learning in the country and Dr. Kinley grew in stature with it as one of the soundest educational thinkers in the land. His genius guided the University successfully through some of the most difficult years of its existence; but the gain to the educational system of the state and the nation was a distinct loss to economic science and to the teaching profession.

In 1897 Kinley married Kate Ruth Neal, whose gracious manners and charming personality endeared her to all those who learned to know her. She died in 1931 in Hong Kong while accompanying Dr. Kinley on a trip to the Orient in the interests of the Chicago Centennial Exposition. The loss of his congenial life partner was a severe blow to Kinley from which he seemed never to have fully recovered.

Kinley's main field of interest in economics was money and banking. The first edition of his book on *Money* with a subtitle, *A Study of the Theory of the Medium of Exchange*, was preceded by the works of Professors Laughlin and Scott which appeared a year earlier and with whose views on the influence of credit and on the relation of the quantity of money to its value Kinley disagreed. Kinley's book was quickly recognized as a very thought-provoking and able presentation of the problem and it continued to be considered as a standard treatise on the subject and used as such for over a quarter of a century; it has been translated twice into the Chinese language.

When, following the panic of 1907, a national monetary commission was created Kinley was asked to prepare for it two monographs, one dealing with "The Independent Treasury of the United States and Its Relation to the Banks of the Country" and the other on "The Use of Credit Instruments in Payments in the United States." In the latter work he continued the studies which he made conjunctive with the Comptroller of the Currency and some other investigators in 1896. He drew some valuable conclusions regarding the effect of credit transactions on the level of prices.

In 1909 Kinley was asked by Professor Patton to serve as chairman of a committee to consider the enlargement of the *Economic Bulletin* and the unification of the publications of the American Economic Association. As a result of the committee's findings there was launched the *American Economic Review*.

From 1906 to 1907 Kinley was a member of the Illinois Industrial Insurance Company. In 1910 and again in 1930 he served as a member of the Illinois Tax Commission.

In 1910 the government appointed him a delegate to the Fourth International Conference of American States at Buenos Aires and also an envoy on special mission to Chile to represent the United States at the Centennial of Chilean Independence. In 1915 Kinley was a delegate to the second Pan American Scientific Congress held in Washington, D.C. From 1913 to 1932 he was

a member of the Committee on Research, in the Division of Economics and History, Carnegie Endowment for International Peace and he acted as the editor of the Preliminary Economic Studies of the First World War carried on under the auspices of the Endowment. He was a member of other committees too numerous to mention. His interest in communal affairs was perhaps best exemplified by a most active part which he took in helping to reopen the First National Bank of Champaign which had to close its doors due to an unwarranted run on the bank. In 1932 he was elected Chairman of the Board of Directors of the bank and remained in this capacity for eight years.

Dr. Kinley's economic views were largely colored by the ideas of the classical school; he realized that the economic world had moved since the days of Smith, Ricardo and Mill, but he contended that fundamentals have not changed and in his theoretical concepts he remained a more or less close adherent to the views expressed by the classical economists; his warnings against the ever increasing control of economic and other activities by federal authority, though expressed repeatedly in his various speeches and writings, were perhaps best summarized in his presidential address before the American Economic Association in 1914, when thirty years ahead of Professor Hayek's book, *The Road to Serfdom,* he warned that, since the government has been recognized as having a right to regulate economic conditions, it will be pushed by the ruling classes toward regulation or control of the rights of others in politics, religion and in other ways. He felt that the destruction of individual freedom was a high price to pay for a temporary or perhaps even a permanent increase in economic welfare; according to him such welfare could be attained without so great a sacrifice.

In 1936 there appeared a book containing some of the most important addresses and papers written by Dr. Kinley while he was President of the University and since he became President Emeritus. It covers a wide variety of topics from Trusts and the Fallacy of the Commodity Dollar to Academic Freedom, Democracy and Scholarship, and The Relation of the Church to Social Reform. As one reads one paper after another one become ever increasingly aware of the straight-forward thinking of the man, of his keen analysis of the problems under discussion, of his clear presentation of the issues, of his wisdom and vision.

Dr. Kinley was never sparing of himself, always assuming heavy tasks and seeing to it that they should be carried out, however difficult and unpleasant they may have been. He was a determined fighter for what he considered just. On one of my last visits at the hospital, just a few weeks before Kinley's death, I found him reading Professor Ely's autobiography. Feeble as he was, sitting slumped in a large chair, too large for his emaciated body, he showed me certain passages in Ely's book. With pride and with some of the fire which often illuminated his face in former years he spoke of the way he carried on to successful conclusion the defense of Ely, who was ill at the time, against the attacks of the Wisconsin Superintendent of Education who accused Ely of radicalism, of economic "heresy," of encouraging strikes and practicing boycotts.

Kinley died as he lived, misunderstood and disliked by some because of his seeming aloofness, of what was described as his ultra-conservatism and because of the blunt way in which he at times expressed himself without mincing words; but respected and admired by many, even by those who not always agreed with him, for his intellectual integrity, his indomitable energy, his unflinching courage, his capacity for work, his unwillingness to sacrifice principles on the altar of expediency, his belief in the dignity of man and his almost passionate plea for the preservation of the freedom of the individual against the encroachment of power, whatever the source of that power may be.

SIMON LITMAN

University of Illinois

NOTES

FIFTY-EIGHTH ANNUAL MEETING OF THE AMERICAN ECONOMIC ASSOCIATION

Cleveland, Ohio—January 24 to 27, 1946

Preliminary Announcement of Program

The fifty-eighth annual meeting of the American Economic Association will be held in Cleveland, beginning Thursday evening, January 24, and ending Sunday afternoon, January 27, 1946.

At the time of the spring meeting of the Executive Committee prospects for a national meeting were so discouraging (at the least, so uncertain) that no definite plans were adopted. Determination of time and place of meeting, with authority to cancel the annual meeting altogether, was left to the President and the Secretary. When the ban on conventions was lifted in September, it was decided to revive the cancelled arrangements of 1942 at Cleveland.

We acted independently, however, and are not planning joint meetings with the other members of the social science group. At this late date it was not feasible to delay the preparation of our own program in order to explore the possibilities of such joint meetings; and there was also considerable sentiment among the membership that a separate meeting of the Association at this juncture would be salutary. After our plans were announced a number of organizations decided to meet at the same time and place. These now include the American Statistical Association, the American Finance Association, the Economic History Association, the Econometric Society, and the American Association of University Teachers of Insurance. In the final issue of the program some of our sessions may appear under joint sponsorship with some of these organizations; but they will be joint only in a formal way, and our own Association assumes full responsibility for its entire program.

The dates chosen for the meetings are largely the result of circumstances beyond our control. The likelihood of extra-heavy pressure upon transport facilities and hotel accommodations during the Christmas holidays virtually limited our choice to the dates actually adopted. With the rather complicated university calendars which now prevail—including not only semester and quarter systems but odd periods dictated by military programs—and with vacations sharply curtailed at many institutions, no dates would have fit all schedules. Since this will be our first meeting on a national scale in four years, it is hoped that members will decide to attend even though it may mean coming on "company time."

All our meetings will be held at Hotel Cleveland, where a limited number of rooms have been reserved for our use for the period of the meetings. *It is urgent that individual reservations be made early.* This hotel will also serve as our headquarters. Other hotels—the Statler, the Hollenden, and the Carter—are within easy reach. Local arrangements are being made by Mr. Daniel A. Hill (1400 Hanna Building), assisted by Dr. Russell Weisman (Western Reserve University).

The following program was arranged by President I. L. Sharfman, with the assistance of some key participants and various Association committees in charge of some of the scheduled round tables. The gaps still remaining are indicated in this preliminary issue. The final issue of the program will be available for distribution at the time of registration.

The Executive Committee plans to meet all day Thursday, January 24, but the opening session—a round table on the problem of "full employment"—will be held Thursday evening. On Friday three sessions will be held concurrently in the morning and afternoon,

in addition to a Luncheon Meeting and the evening session for the Presidential Address. On Saturday there will be three concurrent sessions in the morning, afternoon, and evening, and also a Luncheon Meeting. Sunday morning and afternoon are each reserved for a single round table deemed to be of interest to the entire membership.

It will be noted that a mixed program, covering a considerable variety of subjects, has been arranged. The emphasis is placed upon matters of public policy in crucial and representative directions, but attention is also given to the interpretation of recent economic history, the development of economic thought, and the analysis of economic conditions. As far as possible opportunity has been afforded for the presentation of conflicting viewpoints.

The following scheduled round tables are in charge of Association committees, through their chairmen: Monetary Policy (James W. Bell); Publication of an Annual Review of Economics (Joseph J. Spengler); Agricultural Price Supports (Elmer J. Working); Economic Research (Simeon E. Leland); Consensus among Economists (Corwin D. Edwards); Teaching of Economics (Horace Taylor).

Thursday, January 24

1. MEETING OF EXECUTIVE COMMITTEE (10:00 A.M.)
2. ROUND TABLE ON THE PROBLEM OF "FULL EMPLOYMENT" (8:00 P.M.)

Chairman: Major Paul H. Douglas, USMCR
"Facts, Issues, and Policies," Albert G. Hart, Committee for Economic Development
"Monetary-Fiscal Policy and Employment," Alan R. Sweezy, Williams College
"Wage-Price Policy and Employment," Sumner H. Slichter, Harvard University
Discussion: John H. G. Pierson, Department of Labor
William J. Fellner, University of California
Clark Warburton, Federal Deposit Insurance Corporation
Robert B. Bryce, Department of Finance, Ottawa, Canada
Abba P. Lerner, New School for Social Research
Edwin E. Witte, University of Wisconsin

Friday, January 25

3. THE AMERICAN ECONOMY IN THE INTERWAR PERIOD (9:30 A.M.)

Chairman: Earl J. Hamilton, Northwestern University
"The Decade of the Twenties," Joseph A. Schumpeter, Harvard University
"The Decade of the Thirties," Arthur Smithies, Bureau of the Budget
Discussion: Alexander Sachs, New York, N. Y.
Garfield V. Cox, University of Chicago
George Terborgh, Research Director, Machinery & Allied Products Institute

4. POSTWAR LABOR RELATIONS (9:30 A.M.)

Chairman: To be announced
"Public Policy in Labor Relations," William M. Leiserson, Johns Hopkins University
"Collective Bargaining in the Public Service," Joseph Mire, Economist, American Federation of State, County, and Municipal Employees
"Democracy in Trade Unions," Philip Taft, Brown University
Discussion: Herbert R. Northrup, New York University
Dexter M. Keezer, Department of Economics, McGraw-Hill Publishing Company
Charles W. Anrod, Loyola University
Mark Starr, Educational Director, International Ladies' Garment Workers' Union
Lloyd G. Reynolds, Yale University

5. ROUND TABLE ON MONETARY POLICY (9:30 A.M.)

Chairman: To be announced
A discussion of substantive problems and possible solutions suggested by monetary

questionnaires on *domestic* and *international* issues submitted to selected panels of specialists in this field by Ad Hoc Committee on Monetary Policy (Frederick A. Bradford, Benjamin H. Beckhart, Howard S. Ellis, Seymour E. Harris, Ray B. Westerfield, Leonard L. Watkins, James W. Bell, Chairman)

Topics: Commercial Bank Reserve Requirements; Government Guarantee of Loans and Financial Aid; Federal Reserve Credit Control and Extension of Powers; Relation of Federal Reserve System to the Treasury; Government Ownership and Operation of Banks; Monetary Effects of Public Debt Policy; 100% Reserve Money; Determining Postwar Exchange Parities; Exchange Controls and Domestic Business Fluctuations; Extent to which a Nation Can Permit Freedom of International Payments; Blocked Sterling Balances; Lend-Lease and Foreign Loans and Investments.

Participants, including some members of the Committee, will present opening statements and brief discussion reports on selected topics.

6. LUNCHEON MEETING (12:30 P.M.): Speaker and subject to be announced

7. THE CHANGING STRUCTURE OF THE AMERICAN ECONOMY (2:30 P.M.)

Chairman: Robert D. Calkins, Columbia University

"Shifts in the Geographical and Industrial Pattern of Economic Activity," Blair Stewart, Reed College

"Significant Changes in Commodity and Labor Markets," Richard B. Heflebower, Brookings Institution

"The New Debt Structure," Lawrence H. Seltzer, Wayne University

Discussion: Glenn E. McLaughlin, War Production Board
Francis M. Boddy, University of Minnesota
Ewald T. Grether, University of California
Donald B. Woodward, Research Assistant to the President, Mutual Life Insurance Company of New York
Ralph A. Young, National Bureau of Economic Research

8. ECONOMIC PROBLEMS OF FOREIGN AREAS (2:30 P.M.)

Chairman: To be announced

"Economic Reconstruction in the Far East," Charles F. Remer, University of Michigan

"The Financial Position of China and Japan," Frank M. Tamagna, Federal Reserve Bank of New York

"Trends and Conflicts in the British Economy," Mary E. Murphy, Hunter College

Discussion: John D. Sumner, Department of State
Horace Belshaw, Institute of Pacific Relations
Warren S. Hunsberger, Department of State
Lloyd A. Metzler, Board of Governors of Federal Reserve System
Donald F. Heatherington, Department of Commerce

9. ROUND TABLE ON PUBLICATION OF AN ANNUAL REVIEW OF ECONOMICS (2:30 P.M.)

Chairman: Eveline M. Burns, New York, N. Y.

Participants: Donald H. Wallace, Office of Price Administration
Edward S. Mason, Harvard University
Joseph S. Davis, Stanford University
Morris A. Copeland, National Bureau of Economic Research
Albert B. Wolfe, Ohio State University
E. A. Goldenweiser, Board of Governors of Federal Reserve System
Norman S. Buchanan, Twentieth Century Fund
Seymour E. Harris, Harvard University
Simeon E. Leland, University of Chicago
Aryness Joy Wickens, Department of Labor
Corwin D. Edwards, Northwestern University
Joseph J. Spengler, Duke University

10. PRESIDENTIAL ADDRESS (8:00 P.M.)

Saturday, January 26

11. NEW FRONTIERS IN ECONOMIC THOUGHT (9:30 A.M.)

Chairman: Albert B. Wolfe, Ohio State University
"Immutable Law in Economics and its Limitations," Frank H. Knight, University of Chicago
"The Impact of the Great Depression," Clarence E. Ayres, University of Texas
"The Impact of Total War," Ralph H. Blodgett, University of Illinois
Discussion: Edward H. Chamberlin, Harvard University
Herbert von Beckerath, Duke University
David McCord Wright, University of Virginia
Victor Abramson, Office of Alien Property Custodian
Abram L. Harris, Howard University
John Kenneth Galbraith, Board of Editors, *Fortune* Magazine

12. ROUND TABLE ON POSTWAR SHIPPING POLICY (9:30 A.M.)

Chairman: To be announced
"The Wartime Merchant Fleet and Postwar Shipping Requirements," Hobart S. Perry, United States Maritime Commission
"United States Shipping Policy and International Economic Relations," Henry L. Deimel, Jr., Department of State
"The Determination of Postwar Ocean Freight Rates," Daniel Marx, Jr., Dartmouth College
Discussion: Ralph H. Hallett, United States Maritime Commission
John G. B. Hutchins, Cornell University
Others to be announced

13. ROUND TABLE ON MONOPOLY AND COMPETITION (9:30 A.M.)

Chairman: Frank A. Fetter, Princeton, N. J.
"The Outlook for Effective Competition," George P. Comer, Department of Justice
"An Appraisal of Anti-Trust Policy," Corwin D. Edwards, Northwestern University
"How Far is Government Intervention Consistent with Anti-Trust Policy?" Mordecai Ezekiel, Department of Agriculture
Discussion: Thurman Arnold, Washington, D. C.
Vernon Mund, University of Washington
Emerson P. Schmidt, United States Chamber of Commerce
Theodore O. Yntema, Committee for Economic Development

14. LUNCHEON MEETING (12:30 P.M.): Speaker and subject to be announced

15. POSTWAR RAILROAD PROBLEMS (2:00 P.M.)

Chairman: Eliot Jones, Stanford University
"The Maintenance of Railroad Credit," Ralph L. Dewey, Iowa State College
"The Reorganization of the Railroad Rate Structure," D. Philip Locklin, University of Illinois
"The Interstate Commerce Commission, the Department of Justice,, and the Supreme Court," Elmer A. Smith, Senior General Attorney, Illinois Central System
Discussion: W. H. S. Stevens, Interstate Commerce Commission
Harold D. Koontz, Coordinator of Planning, Transcontinental & Western Air, Inc.
Edwin H. Burgess, Chairman of Traffic Executive Association—Eastern Territory, New York, New York
Robert W. Harbeson, Interstate Commerce Commission
Irston R. Barnes, Civil Aeronautics Board
James C. Nelson, Department of Commerce

16. ROUND TABLE ON INTERNATIONAL INVESTMENT (2:00 P.M.)

Chairman: Howard S. Ellis, University of California
"Foreign Investment and Employment," Randall W. Hinshaw, Board of Governors of Federal Reserve System
"The Effects of Foreign Investment on the Domestic Economy of the United States," Hal B. Lary, Department of Commerce
"Control of International Capital Movements: Objectives and Techniques," Arthur I. Bloomfield, Federal Reserve Bank of New York
Discussion: Norman S. Buchanan, Twentieth Century Fund
J. J. Polak, United Nations Relief and Rehabilitation Administration
Leroy D. Stinebower, Department of State

17. ROUND TABLE ON AGRICULTURE PRICE SUPPORTS (2:00 P.M.)

Chairman: John B. Hutson, War Food Administration
Papers: John D. Black, Harvard University
Elmer J. Working, University of Illinois
Discussion: Theodore W. Schultz, University of Chicago
Merrill K. Bennett, Stanford University
John M. Gaines, Buffalo, N.Y.
Oscar C. Stine, Department of Agriculture
Theodore O. Yntema, Committee for Economic Development

18. ANNUAL BUSINESS MEETING (5:00 P.M.)

19. RECENT DEVELOPMENTS IN PUBLIC UTILITY REGULATION (8:00 P.M.)

Chairman: To be announced
"State Regulation in Depression and War," Ben W. Lewis, Oberlin College
"Rate Regulation by the Federal Power Commission," Nelson Lee Smith, Federal Power Commission
"Rate-Making Policies of Federal Power Projects," James C. Bonbright, Columbia University
Discussion: Clyde O. Fisher, Connecticut Public Utilities Commission
Archibald M. McIsaac, Princeton University
Edward W. Morehouse, New York, N.Y.
Leslie T. Fournier, Securities & Exchange Commission
Martin G. Glaeser, University of Wisconsin
Walton Seymour, Tennessee Valley Authority

20. ROUND TABLE ON INTERNATIONAL CARTELS (8:00 P.M.)

Chairman: Corwin D. Edwards, Northwestern University
"The Relation between Cartel Policy and Commodity Agreement Policy," Bernard F. Haley, Stanford University
"The International Corporate Combine and the National State," Walton Hamilton, Yale University
"The International Exchange of Technology," Robert Terrill, Department of State
Discussion: Vincent Bladen, University of Toronto
Fritz Machlup, Office of Alien Property Custodian
Robert B. Schwenger, Department of Agriculture
Floyd L. Vaughn, University of Oklahoma

21. ROUND TABLE ON ECONOMIC RESEARCH (8:00 P.M.)

Chairman: Simeon E. Leland, University of Chicago
"Developments Concerning the National Research Foundation," Edwin G. Nourse, Brookings Institution
"The Preservation and Use of Wartime Records"
Harold B. Rowe, Brookings Institution

Saul Nelson, War Production Board and Conference on Price Research
Others to be announced

Sunday, January 27

22. MEETING OF EXECUTIVE COMMITTEE (9:00 A.M.)

23. ROUND TABLE ON METHODS OF FOCUSING ECONOMIC OPINION ON QUESTION OF PUBLIC POLICY (10:00 A.M.)

Chairman: Frederick C. Mills, Columbia University
Report of Ad Hoc Committee on Monetary Policy, James Washington Bell, Northwestern University
Report of Ad Hoc Committee on Agricultural Price Supports, Elmer J. Working, University of Illinois
Report of Committee on Consensus and Recommendations as to Association Policy, Corwin D. Edwards, Northwestern University
Discussion: Frank D. Graham, Princeton University
Charles O. Hardy, Federal Reserve Bank of Kansas City

24. ROUND TABLE ON THE UNDERGRADUATE TEACHING OF ECONOMICS (2:30 P.M.)

Chairman: To be announced
Participants: Horace Taylor, Columbia University
Mabel Newcomer, Vassar College
E. E. Hale, University of Texas
Albert B. Wolfe, Ohio State University
Others to be announced

The following persons have recently been added to the membership of the AMERICAN ECONOMIC ASSOCIATION:

Adelman, Lt. M. A., 931 Longfellow St., N.W., Washington 11, D.C.
Alldredge, Capt. R. B., Hq. 8th AAC, Inspector Generals Dept., A.P.O. 343, c/o Postmaster, San Francisco, Calif.
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Babson, P. T., 210 Newbury St., Boston 16, Mass.
Bennett, M. K., Food Research Institute, Stanford University, Calif.
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Dewey, Mrs. L. E., 5127 11th Rd. S,. Arlington, Va.
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Hallowell, E. W., 125 Forrester St., S.W., Washington 20, D.C.

Hawley, Lt. L. T., Staff, Commander Second Carrier, Task Force, c/o Fleet Post Office, San Francisco, Calif.
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Neustadt, Lt. R. E., Admin. Plan. Div., Code OL, Navy Dept., Bur. of Sup. and Accts., Washington 25, D.C
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Nurkse, R., Institute for Advanced Study, Princeton, N.J.
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Shister, J. Syracuse University, Dept. of Econ., Syracuse, N.Y.
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Sievers, A. M., University of North Carolina, Woman's College, Greensboro, N.C.
Smythe, L. T., South Dakota State College, Agric. Econ. Dept., Brookings, S.D.
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Wigder, P., 1329 Fort Stevens Dr., N.W., Washington 11, D.C.

Yoder, F. R., State College of Washington, Pullman, Wash.
You, J. C. M., 711 Mt. Vernon Pl., N.W., Washington 1, D.C.
Zeisel, H., McCann-Erickson, 50 Rockefeller Plaza, New York 20, N.Y.

Lawrence Flinn of the University of North Carolina at Chapel Hill was killed in action in Germany, March 18, 1945.

Harold S. Patton was killed in a motor accident in Washington, D.C., on September 1, 1945. He had been on leave of absence as professor of economics and head of the department of economics at Michigan State College since March, 1943, and was serving, with the rank of Lieutenant Colonel, as chief of the foreign fiscal affairs branch of the Army service forces headquarters.

Appointments and Resignations

Walter S. Adams has accepted a temporary appointment as part-time instructor in the department of economics at the University of Illinois.

Hugh E. Agnew, professor emeritus of marketing at New York University, taught courses in advertising during the autumn quarter at the Ohio State University.

H. K. Allen has returned from his service with the Office of Price Administration in Springfield, Illinois, to the position of professor of economics and director of the Bureau of Economics and Business Research at the University of Illinois.

Richard M. Alt has been appointed lecturer in economics at Princeton University.

Clay J. Anderson has resigned as acting dean and chairman of the division of social studies, Central Missouri State College, to take a position as financial economist of the Federal Research Bank of St. Louis.

Don S. Anderson, associate professor of agricultural economics at the University of Wisconsin, has resumed his teaching and research at the university after having been on leave of absence the past three years, first serving as price executive in charge of the Poultry, Egg, and Dairy Branch of the Office of Price Administration and later as economic adviser to the chief in charge of poultry, egg, and dairy products of the War Food Administration.

James W. Angell is now serving on the Reparations Commission in Berlin, while on leave of absence from Columbia University.

Robert B. Bangs, formerly of the Department of Commerce and more recently a Lieutenant in the Army Air Forces, has joined the department of economics at Indiana University as assistant professor of economics.

James E. Barron, recently industrial relations expert in the War Department, has been appointed instructor in economics at Louisiana State University.

Grace Beckett of the department of economics at the University of Illinois has been advanced from the rank of associate to that of assistant professor.

J. F. Bell has relinquished his duties as acting director of the Bureau of Economic and Business Research at the University of Illinois and is devoting his full time as professor of economics.

Richard F. Behrendt, who has been for the past two years director of the Graduate Institute of Social and Economic Research and professor of economics and sociology of the Inter-American University in Panama, has been named associate professor of international affairs at Colgate University.

Alvin B. Biscoe was appointed dean and professor of economics, College of Business Administration, University of Georgia, on July 1. He was formerly vice chairman and public member of the Fourth Regional War Labor Board and continues as a part-time member of the Board.

Henry Simon Bloch has joined the staff of the Division of Tax Research of the Treasury Department.

Ralph H. Blodgett has been advanced from associate professor to professor of economics at the University of Illinois.

Karl A. Boedecker, formerly of the University of Wisconsin, is now assistant professor of economics in the School of Business Administration, University of Tennessee.

Karl F. Bode, who was granted leave from Stanford University in December, 1944, to serve with the American Air Force Evaluation Board, E.T.O., is now on the staff of the United States Army Trade and Commerce Division, U. S. Group Control Council in Berlin.

R. Preston Brooks, formerly dean of the College of Business Administration, became Dean of Faculties of the University of Georgia on September 1, 1945.

Douglas S. Brown has accepted an appointment as instructor in economics of the School of Business at Temple University.

George Hay Brown has been promoted to associate professor of marketing in the School of Business, University of Chicago.

O. H. Brownlee has been advanced from research associate to assistant professor of agriculture economics at Iowa State College.

L. F. Brush, instructor in accounting at Louisiana State University, has resigned to accept an appointment as assistant professor at Syracuse University.

Louis F. Buckley, Graduate School of Social Science, The Catholic University of America, has been granted a leave of absence to teach at the U. S. Army University Division, Biarritz, France.

Roy J. Bullock of the Johns Hopkins University has accepted an appointment with the U. S. Group Control Council and will be in Germany for several months.

Louis Bultena has been appointed assistant professor in the department of economics and sociology of the University of Wyoming.

Henry A. Burd has relinquished his duties as director of the summer session at the University of Washington to give full time to his position as professor of marketing.

Orin E. Burley has resigned his position at the Ohio State University to accept a professorship in marketing at the Wharton School, University of Pennsylvania.

Arthur R. Burns has returned to Columbia University after several years' leave of absence during which he served in Washington and abroad.

Grant I. Butterbaugh is engaged in adult education work for the University of Washington during the first semester in 1945-46.

Francis J. Calkins, formerly assistant professor of business administration at the Edward N. Hurley College of Foreign and Domestic Commerce at the University of Notre Dame, has been appointed associate professor of business administration at the Robert A. Johnston College of Business Administration, Marquette University.

Lyle E. Campbell will resume his duties as professor of accounting at the School of Business Administration, Emory University, on January 1, after a three-year leave of absence for war work.

Alexander E. Cance, former head of the department of economics of Massachusetts State College who returned to academic life in 1942 to accept a wartime appointment, retired September, 1945.

John B. Canning, who has been on leave of absence from Stanford University since 1941, serving as consultant in the Department of Agriculture, Washington, has had his leave extended in order to serve as consultant and adviser on the staff of the Army's Food and Agriculture Division, United States Group Control Council in Berlin.

Reynold E. Carlson has rejoined the staff of the department of political economy at the Johns Hopkins University after serving in the armed forces for three years.

Albert E. Carson is now assistant professor of accounting in the School of Business of the University of Utah.

W. Harris Carter, Jr., has been named head of the department of economics of the University of Connecticut.

Ralph Cassady, Jr., has been promoted from associate professor to professor of marketing at the University of California, Los Angeles.

Jack Chernick has rejoined the staff of the School of Business Administration at the

University of Minnesota as an instructor after teaching in the department of economics at the University of Manitoba for the past two years.

C. F. Chizek has been appointed associate professor of accounting in the School of Business, University of Chicago.

William C. Cleveland, associate professor of economics at Indiana University, has resumed his teaching duties after a three-year leave of absence spent in government service.

Denzel C. Cline has returned to Michigan State College as professor of economics after a leave of absence during which he served as tax research economist for the Michigan State Department of Revenue and with the staff of the Governor's Tax Study Advisory Committee.

James A. Close is acting assistant professor of economics at the University of Missouri.

Almand R. Coleman, professor of accounting at Washington and Lee University, returned to active teaching in September after service in the Army.

George Craft, formerly vice-president of the Trust Company of Georgia, has been appointed dean of the School of Business Administration of Emory University and will assume his new duties upon his release from the Naval Reserve in which he is now serving as Lieutenant.

P. C. Crafts, Jr., after forty months of duty with the Navy Supply Corps, has rejoined the firm of Donald J. Moore, Boston.

Kingsley Davis of the Office of Population Research at Princeton University has been appointed associate professor of sociology and anthropology.

Edward C. Devereux, Jr., has been appointed lecturer in sociology at Princeton University.

Merrill DeVoe has returned to the Ohio State University as an instructor in marketing after serving in that capacity at the University of Pennsylvania and as an economist with the Office of Price Administration.

E. O. Dille, professor of marketing in the School of Business Administration, University of Tennessee, was employed during the summer as consultant in the division of special studies in the Bureau of Foreign and Domestic Commerce, Washington.

Russell A. Dixon, associate professor of economics, has returned to the University of Pittsburgh after a year's leave of absence with the price adjustment division of the Pittsburgh Ordnance District.

Paul A. Dodd has been promoted from associate professor to professor of economics at the University of California, Los Angeles.

Edna Douglas, formerly of the Woman's College of the University of North Carolina, has joined the department of economics and sociology at Iowa State College as assistant professor of consumer economics.

H. M. Douty has resigned as director of the Program Appraisal and Research Division, National War Labor Board, to accept the position of director, of the labor economics staff, Bureau of Labor Statistics.

Oscar E. Draper of the College of Economics and Business, University of Washington, is teaching courses in accounting at American University, Shrivenham, England.

John T. Dunlop, after serving with the National War Labor Board and the Office of Economic Stabilization, has returned to Harvard University and been promoted to the rank of associate professor of economics.

James S. Earley, associate professor of economics at the University of Wisconsin, has resumed his teaching after a leave of absence of three years, serving as head economist of the Office of the Economic Adviser of the Office of Price Administration and later as adviser on British Commonwealth financial affairs, Division of Finance, Department of State.

Wilford J. Eiteman has been promoted to the rank of associate professor of economics at Duke University.

W. J. Fleig has returned to his position as instructor in the department of accounting at the Ohio State University after serving in the Orient as a Captain in the Army.

John Fordon, after spending the past four years with the Todd Pacific Shipyards, Inc., has resumed his duties as instructor in accounting in the College of Economics and Business at the University of Washington.

Milton Friedman, formerly of Columbia University, has joined the faculty of the School of Business Administration of the University of Minnesota as an associate professor in economics and statistics.

Fern Gleiser has been appointed professor of institution economics and management in the School of Business, University of Chicago.

Carter Goodrich recently attended the International Labor Conference and the sessions of the Governing Body of the International Labor Organization in Paris.

Horace M. Gray, professor of economics at the University of Illinois, has been appointed associate dean of the Graduate School at the University of Illinois.

Leo Grebler is now director of the Housing Finance Division, Office of the Administrator, National Housing Agency, Washington.

Gertrude Grodski has been appointed instructor in economics at the Louisiana State University.

Robert M. Haig spent the month of September in Puerto Rico as an adviser to the Governor on questions of public finance.

Franklin P. Hall, formerly chief of the Public Finance Unit, Land Economics Division, Bureau of Agricultural Economics, Department of Agriculture, is now in charge of travel and miscellaneous accounts in the International Payment Unit, International Economy Division, Bureau of Foreign and Domestic Commerce, Washington.

James K. Hall, who has served for the past year as a Lieutenant in the Naval Reserve, has resumed his teaching duties in public utilities and public finance in the College of Economics and Business at the University of Washington.

Frank H. Hamack of the College of Economics and Business, University of Washington, is teaching secretarial courses and business law at American University, Shrivenham, England.

Seth Hammond of the department of economics at the University of Illinois has been advanced from the rank of associate to that of assistant professor.

George H. Hand has resigned as professor of economics and chairman of the department at the University of Vermont to accept the presidency of Fairmont (West Virginia) State College.

Maurice Happ, formerly of the University of Dubuque, has been appointed lecturer in secretarial studies at the College of Economics and Business, University of Washington.

Clifford M. Hardin, formerly assistant professor at the University of Wisconsin, has been appointed associate professor of agricultural economics at Michigan State College.

R. D. Haun who has been serving as price executive in the Office of Price Administration at Louisville, will return to the staff of the College of Commerce, University of Kentucky, on January 2, 1946.

Floyd B. Haworth of the department of economics at the University of Illinois has been advanced from the rank of associate to that of assistant professor.

Earl O. Heady has been advanced from instructor to assistant professor of agricultural economics at Iowa State College.

Richard B. Heflebower has resigned as dean of the School of Business Administration and head of the department of economics at the State College of Washington. When he leaves his present position as an economic adviser to the Deputy Administrator for Price of the Office of Price Administration, he will join the staff of the Brookings Institution.

Theodore C. Helmreich, formerly assistant professor of economics at St. Louis University and recently discharged from the Army, has been appointed assistant professor of economics at DePauw University.

Amy Hewes, until her retirement head of the department of economics at Mount Holyoke

College, is teaching in the department of economics at Massachusetts State College during the first semester of the year 1945-46.

George H. Hildebrand, Jr., on leave of absence since July, 1943, and now wage stabilization director of the Ninth Regional War Labor Board at Denver, has been promoted from assistant to associate professor of economics at the University of Texas.

Reed Hoar has been appointed instructor in economics at the University of Kansas.

Edgar M. Hoover, a Lieutenant in the Naval Reserve attached to the Office of Strategic Services Mission for Germany, will return to the University of Michigan at the beginning of the spring term as associate professor of economics.

John A. Hopkins, professor of agricultural economics at Iowa State College, has resigned to accept a position with the Office of Foreign Agricultural Relations in Washington.

Joseph B. Hubbard has accepted the position as economist with the Tri-Continental Corporation and its associated companies.

J. Richard Huber, for the past four years a member of the Office of Strategic Services, has resumed his duties as associate professor of foreign trade in the College of Economics and Business, University of Washington.

Leonid Hurwicz, appointed as associate professorship at Iowa State College in September, 1945, is on leave of absence until May 1, 1946, on a Guggenheim fellowship.

Kenneth D. Hutchinson is now professor of marketing and head of the department of marketing and advertising at Boston University.

Stanley F. Jablonski has returned to the University of Pittsburgh as assistant professor of accounting after a leave of absence.

Clifford D. Jacobs has been advanced to the rank of associate professor of business administration at the State College of Washington.

Neil H. Jacoby, professor of finance in the School of Business of the University of Chicago, has been promoted to vice-president in charge of development.

E. C. Jacobson has resigned from his position at the Department of Agriculture and become a member of the staff of the National Bureau of Economic Research.

Herschel F. Jones was recently appointed to the staff of the Bonneville Power Administration.

Andrew M. Kamarck of the Treasury Department is Deputy Director of the Finance Division of the U. S. Group Control Council, Germany, and alternate member of the Allied Finance Directorate for Germany.

Edward C. Keachie, now Captain in the Corps of Engineers, has been appointed associate professor of industrial management in the School of Business Administration, University of Tennessee, and will join the staff on his release from military service.

M. M. Keim, following his resignation as industrial specialist with the War Production Board, has joined the American Potash Institute, Washington, as head of its economics and statistical department.

Donald L. Kemmerer of the department of economics at the University of Illinois has been advanced from the rank of assistant to that of associate professor of economics.

Dudley Kirk has been appointed assistant professor of sociology at Princeton University.

K. E. Knorr, formerly of the Food Research Institute of Stanford University, is now research associate at the Institute of International Studies at Yale University, where he will work on the economic sources of military power with special emphasis on raw materials problems.

Herman E. Krooss has been made junior assistant in the department of economics of the New York University School of Commerce, Accounts and Finance for the year 1945-46.

Ernest Kurnow has been made junior assistant in the department of economics of the New York University School of Commerce, Accounts and Finance for the year 1945-46.

Alan Lanyon, formerly of the University of Maryland, resigned as chief of the Bureau of Ships section of the War Production Board and is with the American Embassy in France, serving as coal specialist.

Ben F. Lemert has been promoted to the rank of associate professor of economics at Duke University.

Don D. Lescohier of the department of economics of the University of Wisconsin has resumed full time teaching after serving part-time the past four years in order to act as consultant to the vice president of manufacturing of the International Harvester Company and with the Allis-Chalmers Company.

Marvin Levine has been made junior assistant in the department of economics of the New York University School of Commerce, Accountant, and Finance for the year 1945-46.

C. L. Littlefield, who was recently released from the Merchant Marine, has been appointed an instructor in the department of secretarial science at Louisiana State University.

J. A. Livingston has joined the staff of the *Philadelphia Record* as business editor.

Philipp H. Lohman, formerly associate professor of economics at Miami University (Ohio) and lately economics adviser and contributing editor to *Times,* has been made chairman of the department of commerce and economics of the University of Vermont.

Arthur N. Lorig of the College of Economics and Business, University of Washington, was a member of the staff of Allen R. Smart and Co. during the summer of 1945.

George J. Malanos, formerly of Harvard University, has joined the staff of the School of Business Administration at the University of Minnesota as an instructor in economics.

Edward S. Mason has resigned from the position he held with the Department of State, Washington, and has returned to Harvard University.

Stacy May is now assistant to the president and company economist of the McGraw-Hill Publishing Company.

Robert W. Mayer, formerly of Lehigh University and the War Production Board, has been appointed associate professor of economics at the University of Illinois.

Joseph F. McConnell has returned to the University of Illinois from the Bureau of Foreign and Domestic Commerce, Washington, as assistant professor in the department of economics.

Duane McCracken has rejoined the staff of the School of Business Administration at the University of Minnesota as an instructor in economics.

Lawrence P. McGrath, of Seton Hall College, has joined the faculty of the Graduate School of Social Science, The Catholic University of America, as assistant professor of economics.

R. D. McIntyre, who has served as Major in the Army Air Corps at Santa Ana, California, since September, 1942, will return to the staff of the College of Commerce, University of Kentucky, on January 2, 1946.

S. Sterling McMillan, formerly statistician for the Northern Trust Company, and more recently regional price economist for the Chicago office of the Office of Price Administration, has been appointed an instructor in the department of economics at Indiana University.

E. B. McNatt, who has been wage stabilizer of the War Production Board, Sixth District, Chicago, has returned to the department of economics at the University of Illinois as associate professor of economics.

Mrs Marian Meinkoth has been appointed instructor in the department of economics at the University of Illinois.

Herman C. Miller has returned to his position as professor of accounting at the Ohio State University after serving as a Captain in the Supply Corps of the Navy.

Wilbert E. Moore has been appointed assistant professor of sociology at Princeton University.

Julian D. Morgan has accepted a temporary appointment as instructor of economics at the University of Illinois.

Philip Neff, formerly research economist with the Haynes Foundation, has been appointed assistant professor of economics at Pomona College.

W. A. Neiswanger, who has been serving with the Office of Price Administration and

Foreign Economic Administration, Washington, has returned to the department of economics at the University of Illinois with the rank of professor of economics.

Edward G. Nelson has been appointed associate professor of accounting at the University of Kansas.

Mrs. Margaret Newberry is acting head of the department of secretarial science at Louisiana State University.

H. C. Nolen has returned to active service as associate professor of marketing at the Ohio State University after serving twenty-six months as a Colonel in the Military Government division of SHAEF.

Russell M. Nolen of the department of economics at the University of Illinois has been advanced from the rank of assistant professor to that of associate professor of economics.

H. M. Norton, head of the secretarial science department at Louisiana State University, was given a leave of absence to handle a program of education in England for the current year.

Thomas L. Norton, formerly chairman of the Second Division of the War Labor Board and 20th Century Club professor of economics at the University of Buffalo, was recently appointed dean of the School of Business and Civic Administration of The City College of New York.

Frank W. Notestein, director of the Office of Population Research at Princeton University, has been named professor of demography in the department of economics and social institutions.

Regnar Nurkse of the economic and finance department of the League of Nations and now associated with the Institute for Advanced Study at Princeton is visiting lecturer in economics at Columbia University for the year 1945–46.

William B. Palmer has been promoted to assistant professor of economics at the University of Michigan.

Clyde William Phelps, head of the department of economics and commerce in the University of Chattanooga, served as senior economist at the Federal Reserve Bank of Atlanta during the past summer.

Orme W. Phelps, assistant professor of industrial relations, has been appointed dean of students of the School of Business, University of Chicago.

Clarence Philbrook has returned from the armed services to take up his former position of instructor in economics at Iowa State College.

M. Ogden Phillips, professor of economics and commerce at Washington and Lee University, returned to active teaching in September after a two years' leave of absence devoted to research in industrial and commercial geography.

Lloyd Pierce has recently accepted the position of associate professor of economics at Carson Newman College at Jefferson City, Tennessee.

Montgomery E. Pike has been promoted to the rank of professor of business law at the Ohio State University.

J. Carl Poindexter has accepted a position as professor of economics at Roanoke College.

Miss Adamantia Pollis has been appointed instructor in economics at Goucher College.

Claude E. Puffer, formerly acting dean of the School of Business Administration and professor of economics, has been appointed dean of administration at the University of Buffalo.

B. U. Ratchford, professor of economics at Duke University, is on leave of absence to serve as chief economic analyst with the Economic Intelligence Unit, United States Group Control Council in Germany.

Frederick Gustav Reuss has been appointed lecturer in economics at Goucher College.

Karl D. Reyer, professor of merchandising and management, has returned to Louisiana State University after a five years' tour of duty as Lieutenant Colonel, during which he served in various parts of the United States and in England and France.

Mrs. Alice J. Reynolds has resigned her position as assistant professor of economics at Goucher College.

Lloyd G. Reynolds was appointed an associate professor of economics and also associate director of the Labor and Management Center at Yale University on July 1, 1945.

Evan O. Roberts has been promoted to the rank of associate professor of business administration at West Virginia University.

Julius Roller, who for the past two years and a half has been working as chief accountant, Detroit Ordnance District, War Department, with renegotiation of government contracts, has been appointed assistant professor of accounting in the College of Economics and Business, University of Washington.

Albert Rose, formerly stationed with the Directorate of Military Intelligence, National Defence Headquarters, Ottawa, has left the Canadian Army to accept the post of Research Director of the Welfare Council of Toronto.

Catherine G. Ruggles, now with the Bureau of the Budget, will return to the department of economics at the University of Illinois the second semester of 1945-46 with the rank of associate professor of economics.

David J. Saposs has resigned as chief economic adviser, Office of Labor Production, War Production Board and is now in Berlin engaged as chief of the Office of Reports and Statistics, Manpower Division, Office of Military Government of Germany.

William H. Schrampfer has been advanced from associate professor to professor of economics at Iowa State College.

Robert T. Segrest, on leave from the University of Georgia, was promoted on October 12 from wage stabilization director to vice chairman and public member of the Fourth Regional War Labor Board.

Lewis Severson has resumed his duties as head of the department of economics at Beloit College following a two-year leave of absence with the Excess Profits Division of the Bureau of Internal Revenue.

Ewing P. Shahan, formerly of Miami University (Florida) and more recently director of research and analysis for the War Manpower Commission in Alabama, has been appointed assistant professor of business administration at Vanderbilt University.

Harald G. Shields, associate professor of business education at the University of Chicago, is on leave of absence to teach at the American University at Biarritz.

Philip M. Smith, formerly at Whitman College, was appointed head of the department of social studies at Union College (Kentucky) and assumed his duties in October.

Robert S. Smith has been promoted to the rank of associate professor of economics at Duke University.

Vladimir de Smitt has been made senior assistant in the department of economics, New York University School of Commerce, Accounts and Finance for the year 1945-46.

Shirley D. Southworth, professor of economics, has returned to the College of William and Mary as acting head of the department of economics for the year 1945-46 after three years' service in the Division of Monetary Research of the Treasury Department.

J. J. Spengler, professor of economics at Duke University, has been appointed by the North Carolina Commissioner of Labor as one of the arbitrators provided under the arbitration act enacted by the last North Carolina legislature.

Henry W. Spiegel is teaching mathematical economics and advanced economic theory at the Graduate School of Social Science, The Catholic University of America.

William A. Spurr, serving as Lieutenant Commander, has been on flight duty as training officer for two carrier air groups at Oceana, Virginia.

William H. Stead, formerly dean of the School of Business and Public Administration and chairman of the department of economics at Washington University in St. Louis; has accepted an appointment as director of the Institute of Research and Training in the Social Sciences and chairman of the department of business administration at Vanderbilt University.

Craig T. Stockdale, formerly with the legal department of the renegotiation division of the Pittsburgh Ordnance District, is now with the University of Pittsburgh as assistant professor of finance.

Jacob B. Taylor has returned to his position as chairman of the department of accounting at the Ohio State University after serving as a Lieutenant Colonel in the Finance Corps of the Army.

W. Bayard Taylor, professor of finance at the University of Wisconsin, has resumed his work after a three-year leave of absence to serve as regional price executive in the Chicago office of the Office of Price Administration.

Richard B. Tennant was appointed instructor in economics at Yale University effective August, 1945.

Ralph I. Thayer, assistant professor of economics at the University of Washington, has been granted partial leave for continuation of his survey of the state's tax system.

William R. Thom has been elected to the House of Representatives as a member of the Ohio delegation.

Rayburn D. Tousley, after nearly two years with the Office of Price Administration, has resumed his position at the State College of Washington, where he has been promoted to the rank of associate professor.

Ernest J. Townsend, associate professor of economics at the Michigan State College of Mining and Technology, has been appointed head of a newly created department of engineering administration.

Orion Ulrey, associate professor of economics at Michigan State College, is on leave during 1945-46 to serve as counselor with the Department of Agriculture.

S. Herbert Unterberger has been appointed director of the case analysis division, National War Labor Board, Washington.

Paul M. Van Arsdell of the department of economics at the University of Illinois continues on leave of absence but has been advanced from the rank of assistant to that of associate professor of economics.

Lawrence L. Vance has taken a leave of absence from his position as lecturer in accounting at the University of California and is an instructor in the School of Business Administration at the University of Minnesota during 1945-46.

Horace H. Washburn has been appointed associate professor in the College of Business Administration and Industry at the University of Wichita.

Gordon S. Watkins, professor of economics at the University of California, Los Angeles, is on sabbatical leave for the year 1945-46.

Albert E. Waugh was recently appointed dean of the College of Arts and Sciences, University of Connecticut, and has relinquished the position of head of the department of economics.

Weldon Welfling, recently promoted to the rank of associate professor of economics at Duke University, who has been on leave of absence to work with the steel price branch of the Office of Price Administration in Washington, resumed his teaching duties in September.

Troy R. Westmeyer has been awarded a Tax Foundation-New York University fellowship in public finance for the year 1945-46.

Janet Weston of the department of economics at the University of Illinois has been advanced from the rank of associate to that of assistant professor.

R. H. Wherry has been promoted to the rank of associate professor of business administration at West Virginia University.

Wells J. Wright has joined the staff of the School of Business Administration at the University of Minnesota as a lecturer in business law.

Dean A. Worcester, Jr., formerly of Louisiana State University, was appointed associate professor of marketing in the College of Business Administration, University of Georgia, in July.

The

1942

DIRECTORY

of the

AMERICAN ECONOMIC ASSOCIATION

(January 8, 1944, January 8, 1945)

SUPPLEMENTARY LIST OF MEMBERS

(January 8, 1944, to January 8, 1945)

* Life members † Contributing members § Subscribing members
‡ Honorary members

A Institution or firm, rank or position, nature of activity (T for teaching, R for research, A for administration, B for business) *Temporary status is indicated by bold-faced type*
B Degrees, with dates and institutions
C Doctoral dissertation (publication date in parentheses)
D Fields of major interest (numbers refer to subject matter fields, in order of expressed preference)*
E Research projects under way (identified by descriptive title)
F Most significant publications (sample limited to three items)
G Directories cross referenced (W for *Who's Who in America*, S for *Biographical Directory of American Scholars*, I for *International Who's Who (Europa)*, and E for *Leaders in Education*)

* List of subject matter groups referred to in **D**:

1. Economic theory; general works
2. Economic history
3. Economic systems; national economics
4. Statistics; economic mathematics; accounting
5. Business cycles and fluctuations
6. Public finance; fiscal policy; taxation
7. Money and banking; short-term credit
8. International trade, finance, and economic policy
9. Business finance; insurance; investments; securities markets
10. Public control of business; public administration; national defense and war
11. Industrial organization; price and production policies; business methods
12. Marketing; domestic trade
13. Mining; manufacturing; construction
14. Transportation; communication; public utilities
15. Agriculture; forestry; fisheries
16. Economic geography; regional planning; urban land; housing
17. Labor and industrial relations
18. Social insurance; relief; pensions; public welfare
19. Consumption; income distribution; co-operation
20. Population; migration; vital statistics

For descriptive subheads under main group titles, see editorial note, pages 127-131 of the 1942 Directory.

ABBOTT, Roy Twinning, 27 Glenbrook Rd., Morris Plains, N.J. **A** The Sperry Corp., econ., statis., B. **B** B.S., Rutgers; M.B.A., New York. **D** 5, 4, 9. **E** Postwar economic conditions.

ABEL, Kenneth N. K., 5109 New Hampshire Ave., N.W., Washington 11, D.C. **A Nat. Mediation Bd., sr. labor econ.,** R. **B** A.B., 1935, Southern California. **D** 10, 5, 17. **E** Development of tire rationing program.

ABRAMOVITZ, Carrie Glasser (Mrs. Moses), 6601 14th St., N.W., Washington 12, D.C. **A FCC, sr. econ.,** R. **B** B.A., 1933, Brooklyn Col.; M.A., 1934, Ph.D., 1940, Columbia. **C** Wage differentials; the case of the unskilled (Columbia Univ. Press, 1940). **D** 17, 20, 14. **F** Trends in the New York clothing industry (Inst. of Public Admin., 1943).

ACHOUR, Assam Y., American Univ., Beirut, Lebanon.

ACKERMAN, Sol, 3524 E. 154th St., Cleveland 30, Ohio.

ADAMS, Eric George, 16 Maple Lane, Ottawa, Canada. **A Foreign Exchange Control Bd., Statis. and Res. Sec., chief, R;** consult. eng., B. **B** B.S., 1929, McGill; M.B.A., 1931 Harvard. **D** 14, 8, 17.

ALEXANDER, Sidney S., 1913 N. Rhodes St., Arlington, Va.

ALLEX, Victor, 635 Elliott St., N.E., Apt. 3, Washington, D.C. **A WPB, indus. anal.,** A. **B** A.B., 1930, George Washington.

ALTER, Gerald Milton, 1530 16th St., N.W., Apt. 108, Washington 6, D.C. **A U.S. Bur. of the Budget, Fiscal Div., asso. fiscal anal.,** R. **B** B.S., 1941, Harvard. **D** 6, 18, 17.

ANDERSON, Gerald E., 436 Bacon Ave., Akron, O.

ANDERSON, Karl L., 4312 N. 4th St., Arlington, Va. **A OPA, Nonferrous Metals Br., price exec., A;** Bryn Mawr Col., asso. prof. econ., T. **B** B.S., 1938, Mt. Allison Univ., Canada; M.A., 1930, Ph.D., 1932, Harvard. **C** Thorstein Veblen's economics. **D** 1, 7, 8.

ANDERSON, Kenneth Morse, U.S.S. Panamint, c/o Fleet Post Office, San Francisco, Calif. **A U.S.N.R., Supply Corps, ens.** **B** B.A., 1942, Coe Col.; grad. student, 1942-43, Northwestern. **D** 6, 7, 1. **E** Excess profits taxes.

ANDERSON, Lois M. (Mrs. Paul H.), 1228 Blair Mill Rd., Silver Spring, Md. **A Office, Quartermaster General, statis.,** R. **B** A.B., 1939, Eureka, Col.; M.A., 1940, Illinois. **D** 4, 9, 18.

ANDERSON, Paul Hamilton, 1228 Blair Mill Rd., Apt. 101, Silver Spring, Md. **A Bur. of**

For. and Dom. Com., statis anal., R. B A.B., 1937, Ohio Univ.; M.S., 1938, Ph.D., 1940, Illinois. C Distributions in stratified sampling (Annals of Math. Statis., Mar., 1942). D 12, 4, 9. E Market measurement studies. F "Effect of war on department stores," Oct., 1944, "Sales potentials in small towns," Dec., 1944, Domestic Commerce.

ANDERSON, William H., 663 State St., Madison 5, Wis.

ANDREWS, Daniel Keith, 181 Indianola Ct., Columbus 1, Ohio.

ANDREWS, Paul R., Prentice-Hall, Inc., 70 Fifth Ave., New York 11, N.Y.

ARIES, Robert S(ancier), 4700 Sansom St., Philadelphia 39, Pa. A Publicker Commercial Alcohol Co., chem. and indus. eng.; consulting eng., B. B B.Ch.E., M.Ch.E., 1941, Poly. Inst. of Brooklyn; A.M., 1942, Minnesota. D 13, 12, 4. E Postwar markets for chemicals: Economic analysis of the organic chemical industry. F "Chemical utilization of wood waste." Chem. Indus., Aug., 1942; "Products of Canadian forests," Timber of Canada, Sept., 1943; "Economic considerations in the production of sugars and alcohol," Indus. and Eng. Chem., Feb., 1944.

ARMSTRONG, Charles M., 8 Jordan Blvd., Delmar, N.Y. A New York State, Dept. of Educa., asso. statis., R. B B.S., 1925, Michigan State Col.; M.S., 1928, Michigan. D 19, 17. 4. E Estimate of occupational opportunities in New York State; estimates of county cash income and expenditures.

ARROW, Anita, 749 West End Ave., New York 25, N.Y. A Student, Hunter Col. D 5, 1, 4.

ASPINWALL, Robert Sayer, 439 Selden Ave., Detroit 1, Mich. A Retired, R. B 1906, Cooper Union. D 3, 1, 4. E Taxing money to create spending and end unemployment. F Our one hope of peace (1942); The Liberation of capitalism (1940); Taxing money (1938).

ATKINSON, Thomas R., Rosemary Apt., Columbia, Mo.

ATKISSON, James, R. 2, Box 722, Sanger, Fresno Co., Calif.

ATTERBERRY, Phil Russell, 4601 27th St., Apt. 3, Mt. Ranier, Md. A Dept. of State, Div. of Fin. and Monetary Affairs, Latin Amer. Sec., econ., RAB. B A.B., 1943, George Washington. D 8, 2, 9.

BACHELOR, Robert Willard, American Bankers Asso., 22 E. 40th St., New York 16, N.Y. A Amer. Bankers Asso., dir. of res. coun., B. B B.B.A., 1920, M.B.A., 1921, Univ. of Washington. D 7, 4, 5. F Statistical reports covering the works program (WPA, rev., 1937); The country bank's portfolio of U.S. government securities (Amer. Bankers Asso., 1944); "Real estate cycles in San Francisco," Nat. Real Estate Jour., Nov. 28, 1927.

BADGLEY, L. Durward, 256 Prospect St., South Orange, N.J. A NHA, deputy, reg. rep., A; FHA, prin. econ., R. D 16, 20, 5. E Research for a monograph on the real estate cycle. F Housing demand of workers on Manhattan (Corlears Hook Group, 1939).

BALABANIS, Homer Paul, Humboldt State Col., Arcata, Calif. A Humboldt State Col., vice-pres., prof. of econ., TRA. B Ph.B., 1920, M.A., 1923, Chicago; Ph.D., 1931, Stanford. C Acceptance banking and the discount market in the United States. D 7, 8, 1. E The economics of the Balkans. F The American Discount Market (Univ. of Chicago Press, 1935).

BARNES, Leo, 292 Madison Ave., New York, N.Y. A Res. Inst. of America, dir. of econ. res., RA. B B.S.S., 1931, City of New York; A.M., 1933, Brown. D 10, 5, 11. E Anatomy of postwar employment. F "Economic equivalent of war," Antioch Rev., Dec., 1944.

BARRETT, Joseph L., 344 E. 48th St., New York, N.Y. A Com. for Econ. Dev., RAB; bus. eng. and res., RAB. B 1925, Columbia. D 11, 12, 5. E Postwar appraisal of American industry and small business problems and financing.

BEANE, Livingston E., 1538 New Jersey Ave., N.W., Washington 1, D.C.

BECKER, A. P., Eastern New Mexico Col., School of Bus. and Econ., Portales, N.M.

BEISEL, Albert R., Jr., 5051 New Hampshire Ave., N.W., Washington 11, D.C. A U.S. Civil Aeronautics Bd., atty. B A.B., 1931, Dartmouth; LL.B., 1934, Yale. D 14, 10, 17. E Legal and economic aspects of the theory of depreciation.

BELL, Stuart, Community Hall, Gladwyne, Pa. A Community work, mgr.; T. B 1907, Harvard. D 6, 17, 3.

BELMAN, (Mrs.) Clare Distel, 416 33rd St., S.E., Washington 19, D.C. A Soc. Sec., Bd., soc. sci. anal., R.A. B B.A., 1939, Ohio State. D 17, 18, 19. E Wages, hours, and other conditions of work under unemployment compensation.

BENGUR, Ali Resai, 2202 Massachusetts Ave., N.W., Washington, D.C. A Turkish Embassy Supply Office, A. B B.S., 1933, Robert Col., Istanbul, Turkey; M.A., 1942, Princeton. D 7, 5, 8. E Turkish monetary policy.

BERMAN, Murray Caesar, Hotel Belvedere, 319 W. 48th St., New York 19, N.Y. A OPA, Newark District Office, district price econ. B B.S., 1939, Columbia. D 10, 4, 1.

BERNSTEIN, Doris B. (Mrs. Marshall M. Holleb), 35 W. 92nd St., New York 25, N.Y. A Bd. of Gov., Fed. Res. System, res. asst., R. B A.B., 1942, Hunter; grad. student, 1943, Radcliffe. D 8, 16, 6. F "Exchange control and exchange rates," "Exchange stabilization funds," Ency. Britannica Yearbook, 1944.

BERNSTEIN, (Mrs.) Sylvia Pollack, 950 25th St., N.W., Washington 7, D.C. A Bur. of For. and Dom. Com., econ. anal., R. B A.B., 1939, Hunter. D 8, 17, 2. E Analysis of tax system of Cuba; public and private finance in Latin America. F Bibliography on labor and social welfare in Latin America (Pan-Amer. Union, Div. of Labor and Soc. Inf., mimeo., 76 pp., May, 1944).

BEROLZHEIMER, Howard, Northwestern Univ., School of Com., Evanston, Ill. A Northwestern Univ., asst. prof., T. B Ph.D., 1942, Yale. C A development of principles in the taxation of insurance companies. D 9, 6, 1. E Taxation of insurance companies. F "An early return to gold," Barron's Weekly, 1938.

BLAIR, John Malcolm, 3010 Crest Ave., Cheverly, Md. A Smaller War Plants Corp., consultant to chm., RA. B B.A., 1936, Tulane; Ph.D., 1941, American. C Labor productivity and industrial prices. D 11, 10, 1. E Effect of the war on the concentration of industry. F Technology and economic balance (Mono. No. 22, Pt. II, T.N.E.C., 1941); "The relation between size and efficiency of business," Rev. of Econ. Statis., Aug., 1942; Wartime prices, August, 1939, to Pearl Harbor (U.S. Bur. of Labor Statis., 1944).

BLAKE, J. Howard, Glenn L. Martin Co., Baltimore 3, Md. A Glenn L. Martin Co., dir. of market res., B. B A.B., 1928, Brown; M.B.A., 1930, Harvard. D 12, 14. E Studies of commercial application of non-aeronautical products.

BLUMBERG, Aaron J., 5761 13th St., N.W., Washington, D.C.

BOGUSLAW, Robert, 87th Signal Co., A.P.O. 448, c/o Postmaster, New York, N.Y.

BRANDT, Karl, Food Research Institute, Stanford University, Calif. A Consult., fed. gov. agencies; Food Res. Inst., econ. and prof. agric. econ., TR. B Dipl. Agr., 1921, Württem-

berg State Col. of Agric., Germany; Dr. Agr., 1926, Col. of Agric., Berlin. **C** Untersuchungen über Entwicklung, Wesen und Formen der landwirtschaftlichen Pacht. **D** 15, 8, 3. **E** Agricultural policy; reconstruction of European agriculture. **F** The German fat plan or its economic setting (1938). Whale oil, an economic analysis (1940) (Food Res. Inst.); Reconstruction of world agriculture (N.W. Norton, 1945). **G** WIE.

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MEYENDORFF, Alexander L., 3150 19th St., N.W., Washington 10, D.C. **A** Gov. Purchasing Com. of Soviet Union in U.S.A., asst. econ., B. **B** B.S., 1936, M.S., 1938, California. **D** 15, 8, 16.

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MILLARD, Mark Jacob, 61 Broadway, New York 6, N.Y. **A** Carl M. Loeb, Rhoades and Co., partner. **B** Ph.D. 1930, Univ. of Heidelberg, Germany. **C** Wages and business cycles (Archiv für Sozialwissenschaft und Sozialpolitik). **D** 1, 5, 6. **F** "Public works," Labor Rev., Geneva, Switzerland, 1935; "Some monetary aspects of government borrowing," A.E.R., Mar., 1943; "Technischer Fortschritt und Arbeitslösigkeit," Archiv für Sozialwissenschaft und Sozialpolitik, 1932.

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POLLAK, Otto, Bettws-y-Coed, Bryn Mawr, Pa. A WLB, wage rate anal., R; T. B J.D., 1930, Univ. of Vienna, Austria; M.A., 1940, Bryn Mawr. D 20, 17, 18. E Employment and old age. F "Discrimination against older workers in industry," Amer. Jour. of Soc., Sept., 1944; "Conservatism in later maturity and old age," Amer. Soc. Rev., Apr., 1943.

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urban youth in the labor market (WPA, 1942). D 17, 1, 4.

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WILLIAMS, Oscar Harrison, 609 S. Fess Ave., Bloomington, Ind. **A** Retired. **B** A.B., 1905, Ph.D., 1923, Indiana; A.M., 1912, Harvard. **C** A mental survey of the teaching recruits of a state. **D** 1, 2, 17. **F** Educational subjects. **G** E.

WILLIAMS, Randall S., 3516 Valley Dr., Alexandria, Va. **A** WPB, econ.; B. **B** A.B., 1929, Univ. of Washington; M.B.A., 1931, Harvard. **D** 5, 6, 8. **E** Effects of fiscal policy on the propensity to consume. **F** "American postwar potentials," Survey Graphic, Mar., 1944.

WILSON, Howard, 2711 Giddings St., Chicago 25, Ill. **A** Carl Schurz Evening High School, econ. teacher; Central Y.M.C.A. Col., instructor of econ., T. **B** B.A., 1942, Central Y.M.C.A. Col. **D** 1, 5, 7.

WOOLFSON, A. Philip, 986 Woodland Ave., Plainfield, N.J. **A** Lawyer; B. **B** A.B., 1923, McMaster Univ.; A.M., 1924, Harvard; J.D., 1935, New York. **D** 5, 7, 8. **D** M-day banking and finance (Bankers Pub. Co., 1940).

WU, Chee-Hsien, 305 Lathrop St., Madison 5, Wis.

YAFFA, Irving, Div. 5-I, U. S. Naval Repair Base, San Diego, Calif.

YOUTSLER, James Saxon, Skidmore Col., Saratoga Springs, N.Y. **A** Skidmore Col., Dept. of Econ., acting chm., T. **B** M.A., 1940, Ph.D., 1942, Iowa. **C** Labor in wartime with special reference to the United States. **D** 17, 1, 7.

ZAGLITS, Oscar, 2700 Que St., N.W., Washington 7, D.C. **A** U.S. Dept. of Agric., sr. agric. econ., R. **B** Dr. rer. pol., 1921, Univ. of Vienna, Austria. **C** Principles of pure monetary economics. **D** 8, 7, 15. **E** Effect of various types of government intervention on international trade.

ZIMMERMAN, George Fulton Daniel, 310½ S. Fifth St., Sprinfield, Ill. **A** State of Illinois, Legislative Council, R. **B** LL.B., 1910, M.S., 1928, Ph.D., 1930, Illinois. **C** Bank rate and the money market in England, France, Germany, Holland, Belgium (1900-31). **D** 7, 18, 6. **E** Legal status of the Illinois and Michigan canal; taxation of hospitals.

ZUCKERMAN, Irving, 1416 R St., N.W., Washington 9, D.C.

CLASSIFICATION OF MEMBERS

1. Economic Theory; General Works

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Labor economics, industrial management: Man, 44, Ph.D., 1931, University of Wisconsin. University teaching experience; research and general experience in business and government agencies. Lecturer in the evening session of a large college and director of education in a commercial organization; on leave to teach in Army University Studies Center, England. Available, February, 1946. E116

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Money and banking, labor economics, corporation finance, investments, statistics: Man, 37, married, Ph.D. Six years of college teaching and administration; 3 years of business experience; 3 years of government administration and supervision of research staff; publications. Desires university or college teaching or administrative position. E202

Money and banking, corporation finance, economics, elementary and intermediate accounting: Man, 29, M.B.A., 1942, Northwestern University. Six years of teaching experience. Discharged veteran, 3 years service. Available immediately. E203

Foreign trade, public finance, industrial management, money, sociology: Man, in early forties, former Vienna economist; also Utrecht University; at present lecturing for the Drummond Professor on Foreign Trade Policy, Oxford University; highly specialized on modern foreign trade policy, locational theory, public finance; did Allied government and private economic and political research work of importance; publications in German and English. Willing to lecture and to do research work in economics, sociology, international relations, modern history, German, French. Acting secretary of the International Academy for Christian Sociology. Seeks American appointment. Dr. A. V. Berger-Voesendorf, 29 Coverly Rd., Headington, Oxford, England.

Labor problems, labor relations, economic principles, American economic history, money and banking, comparative economic systems, consumer economics: Man. Ten years of college teaching and directing research; 4 years in government research and operations. Books and other publications. Desires college teaching or research position. Available in February, 1946. E204

Economic theory, statistics, investments, economic history, fiscal theory, history of economic thought, money and banking: Man, 34, married, A.B., Long Island, B.S., M.B.A., New York, Ph.D., expected at American, 1946. Sixteen years of business experience with largest stock exchange; since 1938 as assistant to chief statistician; last 3½ years on military leave (Lt. Comdr., Supply Corps, Navy). Desires permanent research or teaching position in above fields. Available immediately. E205

Theory of employment and business cycles, national income, labor, political science: Man, 25, married, M.A., Cambridge, England, British; 3½ years Lieutenant in Royal Navy, concurrently London correspondent of a New Zealand journal; new economic research officer to the Government of New Zealand. Desires teaching or research position in America. Available in February, 1946. E206

International economics, money and banking, business cycles, British and European economies, political science: Man, 30, married, M.A. (1st class), B.Litt., Oxford, England. Two years of research at London School of Economics; author of recent British economic report; at present holding teaching post at British university. Wishes one- to two-year teaching appointment at an American university. Available in July, 1946. E207

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